

EFFECTS OF A COMBINED DIDACTIC AND EXPERIENTIAL
DEATH EDUCATION/EMPATHY TRAINING PROGRAM
ON DEATH ANXIETY AND EMPATHIC ABILITY
OF MEDICAL STUDENTS

A Dissertation
Presented to
the School of Education
Drake University

In Partial Fulfillment
of the Requirements for the Degree
Doctor of Education

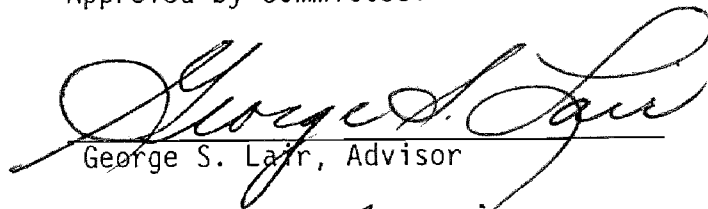
by Deborah Lynn Reed

August 1996

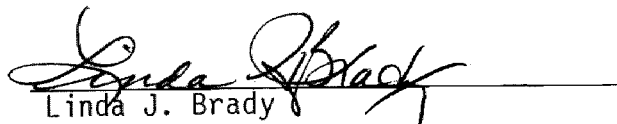
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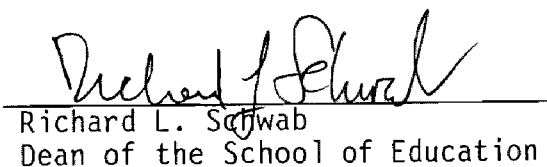
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An abstract of a Dissertation by
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August 1996
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The problem. The majority of medical students are not being adequately prepared to communicate empathically with dying patients. Students' personal anxieties and fear of death may lessen and their empathic interpersonal skills increase with formal academic preparation. This study examined the effects of a death education course which included empathic communication skills training specifically related to interaction with the terminally ill patient.

Procedures. The research design was an experimental pretest-posttest comparison group design. The experimental treatment group consisted of 12 randomly assigned second-year medical students who were given a combined didactic and experiential death education/empathy skills training program in conjunction with 10 weekly videotaped relationship-building sessions with a terminally ill cancer patient. The comparison group consisted of 11 second-year medical students who attended the 10 weekly relationship-building sessions with a terminally ill cancer patient but received no educational intervention or feedback. The dependent measures were students' ratings of empathic understanding on the BLRI Empathic Understanding Subscale (MO-Form), patients' ratings of their student's empathy on the BLRI Empathic Understanding Subscale (OS-Form), and two trained observers' ratings of students' communicated empathy displayed on videotape using the Truax and Carkhuff Accurate Empathy Scale. A 2 (Group) x 2 (Testing Occasion) repeated measures ANOVA was used to statistically analyze each dependent measure.

Findings. There were no statistically significant differences between the experimental and comparison groups ($p > .05$) on the self-report measures of students' death anxiety, students' ratings of empathic understanding, or on the patients' ratings of student empathy. However, the objective trained observers rated the experimental group students as displaying significantly more empathic communicative behaviors ($p < .05$) than the comparison group students.

Conclusions. The present study demonstrated that medical students who receive training in empathic communication skills specifically related to interaction with terminally ill cancer patients display significantly higher levels of communicated empathy than untrained medical students.

Recommendations. Due to the inconclusive results from the patients' ratings of students' empathy, further research is necessary to substantially support the inclusion of such a training program in the medical curriculum.

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Chapter 1

INTRODUCTION

An empathic relationship between physicians and their patients is considered to be the essence of medicine (Glick, 1993). Communication is an integral component of this interpersonal encounter. Through communication with patients, physicians are able to elicit and convey information which may have an impact upon the quality of health care delivered (Novack, Dube, & Goldstein, 1992; White, 1988). Effective communication within the medical interview is vitally important to patient satisfaction (Evans, Stanley, & Burrows, 1992), compliance (DiMatteo & DiNicola, 1982), perception of physician competence (DiMatteo & Hays, 1980), accuracy of diagnosis (Evans, Stanley, Mestrovic, & Rose, 1991; Peterson, Holbrook, Hales, Smith, & Staker, 1992), and health outcomes (Kaplan, Greenfield, & Ware, 1989).

In order to improve the quality of the physician-patient relationship so that good communication can occur, medical educators have made attempts to enhance humanistic qualities such as compassion and caring in medical students and have begun to stress the importance of interpersonal skills applicable to this relationship (Dennis & Prater, 1991; Henderson, 1981; Robinson & Billings, 1985). In 1980, the American Board of Internal Medicine Committee on the Definition of Clinical Competence identified six basic elements of clinical competence, two of which were humanistic qualities and communication skills (Blurton & Mazzaferri, 1985). The Committee concluded in 1983

that medical training programs had a major responsibility to emphasize human qualities, particularly integrity, respect, and compassion in the physician-patient relationship (Benson et al., 1983). The Board now requires that all residents be assessed for their humanistic qualities and behavior prior to being granted certification (Krevans, 1983). Later, in 1987, the medical ethics subcommittee of the American Board of Pediatrics published a paper indicating that interpersonal skills was one of the subject areas in which their candidates would be examined for certification. Included was the requirement that physicians should possess basic knowledge of, and skills in, counseling techniques to enhance positive communication with patients and their families (Daeschner, 1987).

One essential counseling skill underlying effective physician-patient communication is the ability of the physicians to understand and empathize with the patient (DiMatteo, 1979; Evans, Stanley, & Burrows, 1993; Flaherty, 1985; Poole & Sanson-Fisher, 1979). Empathy, which is a core component of the helping process in counseling and psychotherapy (Barrett-Lennard, 1981; Rogers, 1957), helps physicians in their clinical interviews to understand patients' emotional needs which often accompany illness. Empathic understanding by physicians facilitates an atmosphere of trust in which patients may feel free to tell their stories and reveal themselves, an important aim of interviewing and therapeutic interaction (Harris, Eckert, Petzel, & Westmeyer, 1984). However, recent studies indicate that most physicians and medical students do not possess natural empathic abilities and many demonstrate poor skills at detecting patients' anxieties and reactions to illness (Dwyer, Detweiler, & Kosch, 1988; Evans et al., 1993; Hornblow, Kidson,

& Ironsides, 1988). Hence, the teaching of empathy has become an important component of communication skills training for medical students in U.S. medical schools during the past decade (Novack, Volk, Drossman, & Lipkin, 1993). A meta-analysis by Anderson and Sharpe (1991) revealed that such training has a moderate to large impact on medical students' interviewing skills and empathic understanding.

Although empirical studies evaluating the effectiveness of empathic communication skills training have shown promising results (Alroy, Ber, & Kramer, 1984; Evans, Stanley, Burrows, & Sweet, 1989; Evans et al., 1992; Higgins, 1990; Poole & Sanson-Fisher, 1979), the emphasis has been on assessing students' interactions with patients during routine consultations. Little attention, to date, has been focused on teaching medical students to empathically communicate with patients who are suffering with a terminal illness such as metastatic cancer. Empathic understanding and communication by physicians is essential in caring for the terminally ill cancer patient (Katz, 1984; Spiegel, Bloom, & Yalom, 1981). However, many physicians and medical students report difficulties in dealing with the intense emotions surrounding patients' suffering and death (Firth, 1986; Firth-Cozens & Morrison, 1989). Knight (1983) found that medical students experienced feelings of insecurity, anxiety, and hostility, as well as a sense of guilt and helplessness when confronted with seriously ill or dying patients. Hornblow et al. (1988) concluded that medical students should receive systematic training in how to deal specifically with emotionally laden encounters such as those inherent in the care of the terminally ill patient. To date, there has been a paucity of research evaluating programs of this nature.

Part of the distress experienced by physicians and medical students in dealing with the intense emotions associated with terminal illness (e.g., fear, anger, grief) may be due to the fact that caregivers are reminded of their own mortality (Cassidy, 1986). The fear and apprehension surrounding thoughts of one's own death has been referred to as death anxiety within the field of death education (Lonetto & Templer, 1986). Physicians who fail to appropriately deal with their own personal reactions to death anxiety have been reported to use defensive coping strategies such as physical withdrawal, emotional detachment, and poor empathic communication when confronted with dying patients (Lonetto & Templer, 1986; Neimeyer, 1988). As a result of such avoidance behaviors by physicians, patients feel poorly understood and emotionally abandoned (Katz, 1984).

Counseling theory posits that individuals must be open to, and accepting of, their own experiencing in order to be empathic listeners with others who share similar experiences (Rogers, 1959). However, the ability to be consciously aware of self may be thwarted by the presence of death anxiety. Viewed within the Rogerian framework of psychological defense, death anxiety occurs when an individual's perception of self (i.e., self-concept) does not include acknowledgement and acceptance of one's own inevitable death. Approaching death is thus viewed as a threat to self and reacted to with feelings of fear and apprehension. In an attempt to prevent these adverse feelings from entering consciousness, the individual must deny or distort his/her own experience of mortality. Such defense mechanisms serve to protect against anxiety but at the same time, decrease one's self-awareness and ability to empathically understand others who are struggling with the dying process.

During the past two decades, educational programs have been developed in an effort to assist students to gain increased self-awareness and acceptance of their own personal fears and reactions associated with the dying process. The major dependent variable in the majority of evaluation studies examining the psychological effects of these death education courses has been a change in the level of the participants' anxiety about death (Durlak & Riesenbergr, 1991). The results of these studies tend to be marked by a great deal of inconsistency. Some reports document a reduction in death anxiety associated with programs of death education (e.g., Glass, 1990; Lockhard, 1989). In other studies, no such effect was evident (e.g., McClam, 1980; Peace & Vincent, 1988). Yet, in still other studies, death education reportedly was associated with an increase in death anxiety scores (e.g., Hayslip & Walling, 1985-86; Johansson & Lally, 1990-91). To some extent, these discrepancies may reflect, in a systematic manner, differences in research methodology or in style of death education (Combs, 1981). A meta-analysis conducted by Durlak and Riesenbergr (1991) reported that experiential programs achieved significantly better affective outcomes, i.e., less death anxiety, than didactic programs. None of the death education studies reviewed focused on medical students, nor has any study evaluated the effectiveness of combining didactic and experiential components into an integrated death education program for medical students.

Medical students need formal instruction in death education to help them cultivate knowledge, attitudes, and skills necessary to care for seriously ill patients (Mermann, Gunn, & Dickenson, 1991). Although the need for death education is acknowledged, a recent survey by

Holleman, Holleman, & Gershenhorn (1994) indicated a substantial lack of attention devoted to the dying process in the curriculum of many U.S. medical schools. They concluded that medical schools need to improve the quality of instruction within the area of death education and suggested the use of a model currently used by Yale University School of Medicine. Within this model, medical students are assigned to patients with life-threatening illnesses. Over a period of months, the student gains an understanding of what it is like to be seriously ill and perhaps dying by developing an ongoing relationship with a patient willing to share his/her experiences. These sessions, along with weekly small group discussions facilitated by an instructor, serve to demystify the process of dying as well as help students learn to talk comfortably with those who are ill and suffering. Such an intervention suggests that death education programs may hold the potential for both decreasing levels of death anxiety and enhancing empathy in students. Although there has been no reported empirical study to date as to the effect of such a teaching model on students' death anxiety levels and empathic communication skills, such an endeavor appears timely and worthwhile. The present study included the development of an ongoing relationship with a terminally ill patient and the processing of this relationship with an instructor.

Problem Statement

The review of literature suggests that the majority of medical students are not being adequately prepared to (a) recognize and manage their own personal responses to loss and anxieties about death and dying, (b) understand the experiences of the dying person and the

dynamics of grief, and (c) facilitate empathic interactions with dying patients and their families. There exists a need for improved death education programs for medical students which have as their primary aim the lowering of death anxiety and the enhancement of empathic communication skills with the dying patient.

Conceptual Model

Based upon an integration of findings in the interpersonal communication skills literature, the literature on death education, and Rogerian counseling theory, a conceptual model was designed. Rogers' humanistic theory was chosen for inclusion in the model as it emphasizes the importance of the counselor's communicated empathic understanding of the client's subjective world within a genuine, caring relationship as being the therapeutic force contributing to client growth and constructive personality change (Rogers, 1957). Further, Rogers' model of psychological defense serves to help explain how a counselor's death anxiety might prevent such empathic understanding from occurring (Tomer, 1992). Other counseling models, such as cognitive-behavioral approaches represented by Ellis' rational emotive therapy (RET), minimize the importance of an empathic relationship between the counselor and client. Rather, these counselors focus primarily on challenging clients' irrational beliefs which are considered to be the underlying cause of psychological maladjustment and accompanying anxiety. The clients' faulty cognitions are changed through directive counselor education and the use of homework assignments (Ellis, 1984). The role that cognitive-oriented counselors' death anxiety might play in adversely effecting client growth is not clearly delineated within these counseling

frameworks. The psychodynamic approaches were rejected as an appropriate counseling model since they involve long-term exploration of unconscious processes within the client. These types of approaches would prove to be too complex and too time consuming for this type of student-patient relationship. Hence, Rogers' client-centered theory appeared to be a more appropriate choice as a conceptual framework for understanding the development of an empathic relationship between medical students and patients, and for understanding the adverse role that death anxiety might play in this process.

Figure 1 illustrates this conceptual model which depicts the sequence of events which may occur when medical students are exposed to terminally ill patients without conscious awareness of their own mortality gained through death education and without adequate training in empathic communication skills. Although the supporting research and theoretical underpinnings for the model have been elaborated more fully within Chapter 2, the model will be presented here as it serves as a basis for hypotheses generation and selection of data gathering instruments.

The model suggests that the exposure of medical students to the care of terminally ill patients without conscious awareness of one's own mortality (gained through effective death education) and without adequate training in empathic communication skills may inhibit the development of a trusting relationship between student doctor and patient. Viewed within a Rogerian framework of psychological defense, without conscious awareness of one's mortality gained through effective death education, the encounters of students with dying patients may be interpreted as threatening to their concepts of self. Their perceived

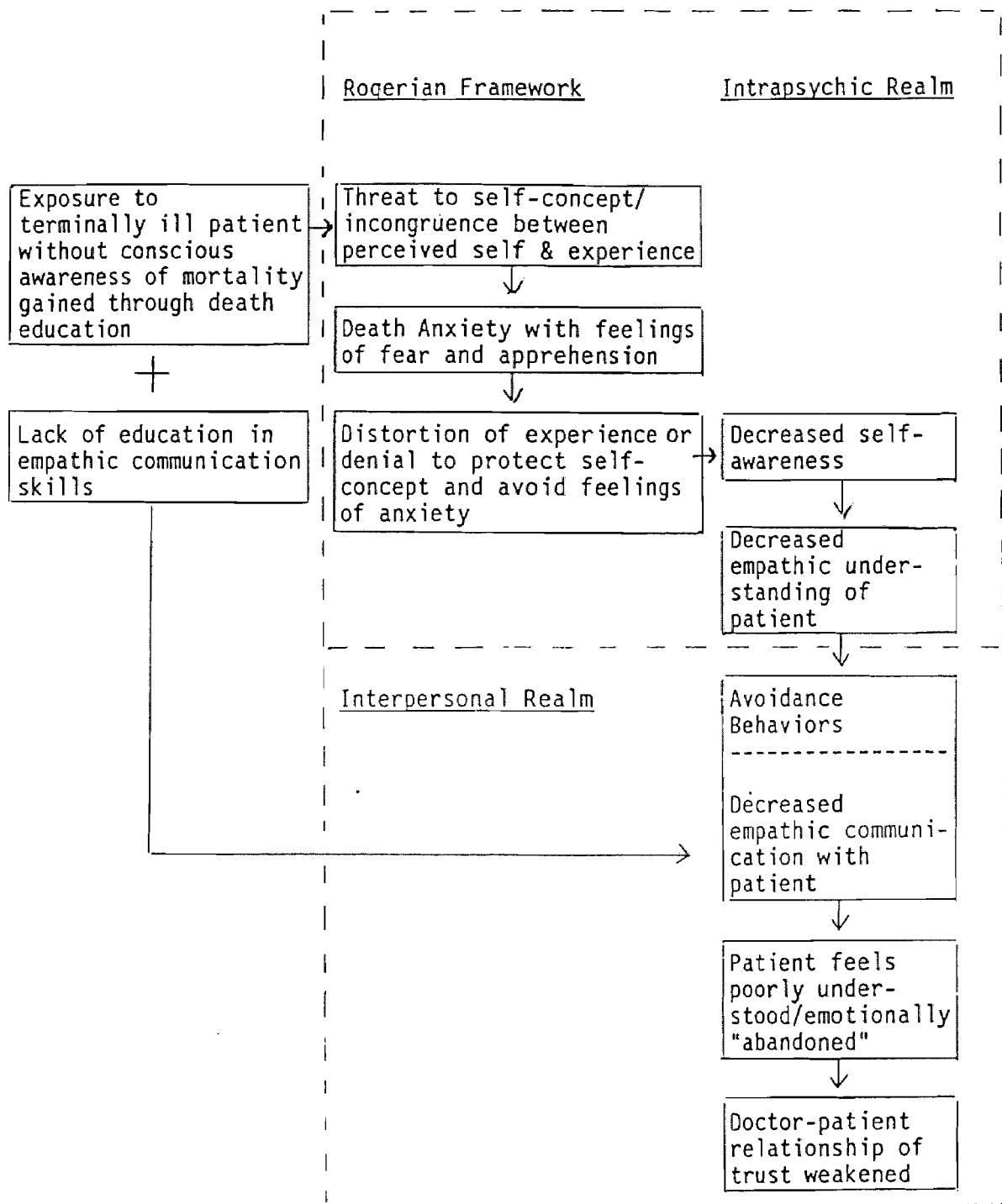


Figure 1. Conceptual Model.

self may not include an experiential awareness and acceptance of their own mortality. Hence, an incongruence will exist between perceived self and experience. When exposed to dying patients, their own feelings of fear and apprehension which are the overt manifestations of death anxiety may be provoked. In an attempt to protect against such feelings, students may deny or distort their own experiences and the experiences of others. Such defenses may serve to significantly decrease students' self-awareness or may, in some cases, block self-awareness entirely.

Without full self-awareness and acceptance of one's fears and anxieties regarding death and dying, students are limited in their abilities to empathically hear and understand patients who are experiencing similar fears and anxieties. As a result, empathic communication on an interpersonal level with patients will be inhibited. The lack of empathic communication is considered in the research literature on death anxiety to be a form of avoidance behavior. In addition, the research on communication skills contends that such avoidance behavior may arise out of a lack of empathy training. Whatever the source, without sufficient empathic communication by medical students, patients may feel poorly understood and emotionally abandoned. These conditions may serve to inhibit the establishment of rapport and trust between the student doctor and patient.

Purpose of the Study

The purpose of the present research study was to determine the effects of a combined didactic and experiential death education intervention, which included empathic communication skills training in conjunction with weekly relationship-building sessions with terminally

ill cancer patients, on the level of death anxiety and empathic ability of medical students.

Significance of the Study

The present study was of importance in that an empirical assessment of a death education intervention which focuses on the development of empathic understanding and communication skills training had not previously been done with medical students. Communication skills training programs have primarily taught skills to be used during initial consultation visits and have not specifically addressed the needs of the terminally ill cancer patient. Death education programs have primarily focused on decreasing levels of death anxiety but have not empirically examined how such attitudinal change may effect actual empathic communication with patients. The integration of communication skills training into a death education context served to assist students in learning how to develop an empathic relationship with the dying patient.

Limitations of the Study

1. The study's results may be applicable only to medical students who train at an osteopathic university as opposed to an allopathic medical school. The osteopathic medical training, by definition, is more holistic in nature as compared to the allopathic medical school training process.

2. Patients who volunteered for participation in the study were not necessarily in a state of crisis and had not sought counseling. This might have precluded patients' willingness to share at deep levels which subsequently might have effected students' ability to be empathic.

3. The study employed a small number of students due to the seminar format of the educational intervention and the inherent difficulty in recruiting terminally ill patients who were willing and physically able to commit to a 10-week research project.

4. The study employed only one professor who administered the experimental intervention which included didactic lectures and process seminars. Hence, the treatment effects might not be generalizable to conditions in which a different individual serves as the instructor.

5. The design of the study did not employ a no-treatment control group, but included a comparison group instead. Hence, if non-significant findings between the experimental and comparison group occur, it remains questionable as to whether or not either of the two treatment conditions were more effective than no treatment. A no-treatment control group was not used, as the number of metastatic cancer patients available for participation in the study was limited. Further, it was thought by the investigator that a comparison group in which students met with patients but received no educational training was needed to determine whether or not the training intervention was effective as opposed to the mere experience of interacting with patients.

Statement of Research Hypotheses

1. There is a difference in the levels of death anxiety as measured by Templer's Death Anxiety Scale between medical students who receive a combined didactic and experiential death education/empathy training course in conjunction with weekly relationship-building sessions with a terminally ill cancer patient and medical students who

are in a comparison group who receive the weekly relationship-building sessions with a terminally ill cancer patient but receive no educational intervention.

2. There is a difference in the levels of empathic understanding experienced by medical students as measured by the clinician form (M0) of the BLRI Empathic Understanding Subscale between medical students who receive a combined didactic and experiential death education/empathy training course in conjunction with weekly relationship-building sessions with a terminally ill cancer patient and medical students who are in a comparison group who receive the weekly relationship-building sessions with a terminally ill cancer patient but receive no educational intervention.

3. There is a difference in the levels of communicated empathy as measured by Truax and Carkhuff's Accurate Empathy 9-point Scale between medical students who receive a combined didactic and experiential death education/empathy training course in conjunction with weekly relationship-building sessions with a terminally ill cancer patient and medical students who are in a comparison group who receive the weekly relationship-building sessions with a terminally ill cancer patient but receive no educational intervention.

4. There is a difference in the levels of patients' received empathy as measured by the client form (OS) of the BLRI Empathic Understanding Subscale between medical students who receive a combined didactic and experiential death education/empathy training course in conjunction with weekly relationship-building sessions with a terminally ill cancer patient and medical students who are in a comparison group

who receive the weekly relationship-building sessions with a terminally ill cancer patient but receive no educational intervention.

Statement of the Null Hypotheses

H¹: There is no difference in the levels of death anxiety as measured by Templer's Death Anxiety Scale between medical students who receive a combined didactic and experiential/empathy training course in conjunction with weekly relationship-building sessions with a terminally ill cancer patient and medical students who are in a comparison group who receive the weekly relationship-building sessions with a terminally ill cancer patient but receive no educational intervention.

H²: There is no difference in the levels of empathic understanding experienced by medical students as measured by the clinician form (MO) of the BLRI Empathic Understanding Subscale between medical students who receive a combined didactic and experiential death education/empathy training course in conjunction with weekly relationship-building sessions with a terminally ill cancer patient and medical students who are in a comparison group who receive the weekly relationship-building sessions with a terminally ill cancer patient but receive no educational intervention.

H³: There is no difference in the levels of communicated empathy as measured by Truax and Carkhuff's Accurate Empathy 9-point Scale between medical students who receive a combined didactic and experiential death education/empathy training course in conjunction with weekly relationship-building sessions with a terminally ill cancer patient and medical students who are in a comparison group who receive

the weekly relationship-building sessions with a terminally ill cancer patient but receive no educational intervention.

H⁴: There is no difference in the levels of patients' received empathy as measured by the client form (OS) of the BLRI Empathic Understanding Subscale between medical students who receive a combined didactic and experiential death education/empathy training course in conjunction with weekly relationship-building sessions with a terminally ill cancer patient and medical students who are in a comparison group who receive the weekly relationship-building sessions with a terminally ill cancer patient but receive no educational intervention.

Chapter 2

REVIEW OF THE LITERATURE

This chapter is divided into two parts. Part I begins with a discussion of the construct of empathy and the important role that empathy plays within the physician-patient relationship. Following this is a review and critique of relevant research evaluating interpersonal communication skills training programs for medical students. Part II begins with a discussion of the role that empathy plays within the relationship between physician and the terminally ill patient. The construct of death anxiety is presented and discussed within the Rogerian framework of psychological defense. Relevant research evaluating death education programs aimed at reducing participants' death anxiety levels follows, with a critique of this research concluding the chapter.

Part I

Role of Empathy in the Physician-patient Relationship

Researchers and clinicians have agreed that one essential skill underlying effective physician-patient communication is the ability of the physician or student to understand and empathize with the patient (DiMatteo, 1979; Evans et al., 1993; Flaherty, 1985; Poole & Sanson-Fisher, 1979). Empathy, as defined by psychotherapist Carl Rogers, is the ability "to perceive the internal frame of reference of another with accuracy, and with the emotional components and meanings which pertain thereto, as if one were the other person, but without ever losing the

'as if' condition" (1959, p. 210). According to Rogers, empathy is not only a basic element of effective interpersonal relationships, but also one of the three essential characteristics of a therapeutic relationship, along with helper genuineness and unconditional positive regard. Although Rogers suggested that the three are essential to his client-centered method of therapy, empathy was considered to be of prime importance. An empathic helper who acknowledges the helpee's inner world of feelings and meanings, and communicates this understanding, facilitates the development of trust and encourages continued self-exploration by the helpee. Within the medical context, such empathic understanding by the physician is crucial to the establishment of rapport and in creating a psychological climate conducive to the exploration of feelings that patients experience about their medical problems (Evans et al., 1993).

The construct of empathy as defined by Rogers was expanded through a number of empirical research studies by Truax and Carkhuff (1967). The primary focus of their studies was on the communication of accurate empathic understanding through behavioral and verbal expressions. They defined accurate empathy as "the ability to be sensitive to another's current feelings and the verbal facility to communicate this understanding in a language attuned to the patient's present feelings" (Truax & Carkhuff, 1967).

Barrett-Lennard (1981) was of the opinion that the concept of empathy must be viewed as a process, rather than only as verbal communication by the therapist or helper. The process of empathy involves three distinct phases. Phase one refers to the inner process of empathic listening and understanding by the therapist. Phase two refers

to the communicated or expressed empathic understanding by the therapist. The third phase of the empathy cycle is received empathy by the client or helpee. This empathy cycle takes into account both affect and cognition as well as the experience of both the client and therapist. Little research has been done to test the validity of the empathy cycle within the physician-patient relationship and thus warrants investigation.

The perceived importance of empathy within the physician-patient relationship has grown during the past decade with the introduction of the patient-centered clinical method in family practice. A primary goal of this approach is for physicians to achieve an understanding of patients' experiences of their illnesses (Levenstein, McCracken, McWhinney, Stewart, & Brown, 1986; Weston, Brown, & Stewart, 1989) and to gain insight into patients' "lifeworlds" (White, 1988). Such understanding of patients from their point of view offers information to physicians concerning the personal meanings that illness represents as well as the individual psychological needs of each patient. According to Levenstein, the patient-centered approach is similar to Rogers' person-centered approach in counseling in that both share the goal of understanding patients from the patient's point of view. The development of a strong sense of empathy towards patients facilitates the accomplishment of this goal.

Interpersonal Communication Skills Training

Studies concerning medical students' abilities to understand how patients feel and to demonstrate their understanding when actually interviewing patients have generally found that students are poor at

empathizing with patients, and many have poor natural skills at detecting patients' anxieties and reactions to illness (Dwyer et al., 1988; Evans et al., 1993; Hornblow et al., 1988). To counter this problem, there has been a recent growth of training courses for medical students, designed to improve their empathic skills and interviewing effectiveness. Evaluations of these programs have shown that students who receive specialized training in communication theory and practice subsequently display significantly improved interpersonal skills in their interviews with patients, compared with their more traditionally trained peers (Evans et al., 1989; Maguire, 1984), show greater warmth and empathy (Alroy et al., 1984; Evans et al., 1993; Higgins, 1990; Poole & Sanson-Fisher, 1979), achieve higher satisfaction ratings from their patients (Evans, Stanley, & Burrows, 1992), and demonstrate increased ability to respond to patients' verbal and nonverbal cues (Alroy et al., 1984; Evans et al., 1989). There is also evidence to suggest that students given specialized interview training are able to conduct medical interviews that are assessed by doctors as more diagnostically efficient (Evans et al., 1991).

The evaluation of empathy training courses has presented a challenge for medical educators. Evans, Stanley, Coman, and Sinnott (1992) reported that the use of cognitive and attitudinal measures of empathy have limited usefulness in detecting changes in medical students' communication skills following training. Students' expressed attitudes, for instance, do not often correlate with interview behaviors. Hammond and Kern (1979) found that a group of medical students given specialized training significantly changed attitudes toward patients' psychosocial care as compared with a control group, but

were found no more likely to attempt to elicit and discuss psychosocial concerns with patients than were control group students. Therefore, emphasis has been placed on behavioral techniques to determine the effectiveness of empathy training programs. The most common form of such behavioral assessment has been to evaluate students' pre- and post-training interviews with patients or simulated patients (Evans et al., 1993; Higgins, 1990; Poole & Sanson-Fisher, 1979; Weihs & Chapados, 1986). This has been accomplished by actual observation of students' performances. Scales used in these studies to measure empathic responsiveness have included those developed by Truax and Carkhuff (1967) and Carkhuff (1969). Findings have shown that such behavioral training is effective in acquiring empathic communication skills.

Anderson and Sharpe (1991) conducted a meta-analysis of 40 experimental trials designed to enhance communication skills of patients or health-care providers. Calculation of effect sizes offered a method for comparing the impact of these interventions on communicative behaviors. Studies which did not employ the use of a comparison or no treatment control group were not included in the analysis. Studies assessing communicative behaviors through indirect methods such as paper and pencil tests or self-reports from subjects were excluded.

Interventions were classified into one of four groups: (a) instruction, (b) feedback, (c) modeling, and (d) skill practice. Interventions categorized as instruction included videotaped lectures, self-instruction, and face-to-face didactic sessions aimed at facilitating the communicative behaviors of participants. Interventions categorized as feedback provided detailed assessment/evaluation of the participant's performance related to the medical interview. Feedback was

most often used alone but was sometimes supplemented with instruction (i.e., lectures or readings). Modeling interventions consisted of the observation of a model to provide knowledge of what to do as well as a concrete example of how to do it. Modeling strategies were often combined with instruction and/or feedback. Interventions categorized as skill practice involved participants actually producing the behavior(s) of interest and refining skills through repeated practice. Programs focused on skill practice frequently included didactic instruction, multiple feedback sessions and, in a few cases, modeling.

Communicative behaviors (the dependent variable) were categorized into two broad categories: (a) interpersonal processes, (b) interviewing skills. Within the domain of interpersonal processes, language use and speech patterns are examined in order to describe how communication may reflect underlying social relationships. Of interest to this research were the studies reviewed by Anderson and Sharpe (1991) which examined medical students' and residents' interpersonal communicative behaviors classified as socio-emotional behaviors (e.g., empathy).

The second major category of communication focused on interviewing skills of medical students. These studies examined two subcategories of interviewing skills: content and technique. Interviewing skills related to content refer to the ability to gather, synthesize, and provide information during a clinical interview. Content of the interview was usually reported in terms of the amount of data obtained (i.e., percentage of relevant data solicited from a patient) or ratings of the clinician's ability to gather information during the medical interview.

Interviewing skills related to technique focused on the competency of the clinician to conduct and manage an interview. Generally,

competency in the medical interview was rated by using a checklist of specific skills to include the following basic elements: opening and closing an interview, the use of open-ended versus closed-ended questions, transitional statements and/or behaviors that connote the establishment of rapport and empathy. Interviewing technique was most often evaluated by trained observers and reported as frequency counts (e.g., presence or absence of a specific skill) or as ratings of various interviewing skills.

Anderson and Sharpe (1991) gave each study used in the meta-analysis a rating of methodological quality. Ratings (up to a maximum of five points) were awarded depending on how well an individual study addressed the following issues related to internal and external validity: (a) use of experimental design with random assignment of subjects to groups rather than quasi-experimental design, (b) use of random sample of subjects from a specified population rather than a convenience sample, (c) adequate sample size per group sufficient to detect a significant effect ($p < 0.05$) with a power of 0.80, (d) coder interrater reliability > 0.80 , (e) specification and use of blinding for interaction analysis.

Results of Anderson and Sharpe's (1991) findings demonstrated that a total of 35 studies reported data from a primary-study (immediate posttest) and 5 studies assessed long-term impact of the intervention. Of those 30 primary studies targeted at health care providers (medical students and residents), 56% used randomization procedures for assigning subjects to treatment conditions. Quasi-experimental designs were used most frequently in interventions conducted during clerkship and residency rotations.

The type of intervention most frequently employed in studies targeted at health care providers was skill practice. In 15 out of 30 studies, this broad category incorporated multiple strategies to include modeling, feedback, and instruction along with the primary intervention of skill practice. Training time was reported in 7 studies, with implementation time ranging between 20 minutes and 30 hours.

The second most frequently employed intervention for health care providers was feedback. Ten studies employed this method of intervention. Three studies used only a single feedback session and the remaining seven studies supplemented feedback with instruction. Length of training was reported in four studies only, varying between 1.5 and 4 hours.

Four studies targeted at health care providers used modeling as the primary intervention strategy. Two of these four studies combined modeling with instruction and the remaining two included instruction and feedback. Only 1 study out of the 30 used instruction alone as the primary intervention strategy.

Because many researchers used combinations of various intervention strategies rather than a single type of intervention strategy, Anderson and Sharpe (1991) were unable to compare the relative efficacy of the different types of interventions on communication behaviors. Rather, they examined subcategories of communicative behaviors (outcome variables) by specific target groups (patient or health care provider) when assessing effect size. A descriptive summary of the types of communicative behaviors examined, sorted by target of intervention, revealed that only 9 of the 30 health care provider-directed studies involved communicative behaviors in the domain of interpersonal

processes (e.g., empathy). The remaining 21 studies targeted their interventions at interviewing skills although 4 of these included interpersonal process variables.

The mean quality rating given to the nine health care provider intervention studies assessing interpersonal processes was 2 and varied between 0 and 3. Out of these nine studies, three focused on socio-emotional behaviors as outcome measures (e.g., empathy). Effect size values could be calculated for two studies (Moreland, Ivey, & Phillips, 1973; Weihs & Chapados, 1986) and were 1.36 and 4.47 respectively. Both of these studies employed an interpersonal skills training course with skills practice, modeling, and feedback as the intervention strategy.

Anderson and Sharpe (1991) were unable to draw any conclusive statements about the relative efficacy of health care provider interventions on interpersonal processes due to the dearth of studies examining any given behavior (such as physician empathic responses alone) and the wide variability of the types of provider-targeted interventions. There exists a need to conduct further investigations such as the efficacy of interpersonal skills training on the empathic abilities of medical students to help augment the research literature in this area.

The mean quality rating given to the 11 medical student intervention studies assessing interview skills was 2.36, ranging from 1 to 3. Among the 7 studies assessing content, the effect sizes were not homogeneous and ranged from -0.17 to 1.56. After removing the outlier, Anderson and Sharpe (1991) reported that interventions exhibited moderate to large effects on enhancing content of providers' interviewing skills.

Ten of 11 studies examining technique (along with content) provided data with which to calculate effect size. Effect sizes were not homogeneous and ranged from -0.27 to 2.36. Again, removing the outlier study, results varied within intervention types but generally indicated a moderate to large impact on interviewing technique. Within these 11 studies, 4 also examined the interpersonal process of medical student empathic responses as part of the interview technique rating criteria.

Overall, what can be concluded from Anderson and Sharpe's (1991) meta-analysis is that a combination of primarily skills practice augmented by feedback, instruction, and in some cases, modeling, has a moderate to large impact on medical students' interviewing skills. The few studies which assessed the effect of such a combination of intervention strategies on medical students' ability to respond empathically to patients demonstrated promising results. However, more well-designed studies are needed to validate such findings.

Anderson and Sharpe (1991) warned that the results of their meta-analysis must be considered within the limitations of the studies reviewed. One methodological concern which proved to be a persistent problem across studies in the medical literature was incomplete description of their interventions, with information about the duration and frequency of interventions being most consistently omitted. Another limitation in the majority of studies was the absence of any underlying conceptual model or theory guiding the selection of intervention strategies and communication behaviors. As noted by the authors, without clear conceptual linkages between intervention strategies and communicative behaviors it is not possible to identify the mechanisms related to behavioral change. Also of concern to these authors was the

question of whether or not communication skills acquired by pre-clinical medical students through interactions with simulated patients would generalize to actual patient care situations. Future studies which train students to communicate empathically with real patients may prove to offer increased generalizability. Anderson and Sharpe further suggested that future studies assessing the impact of communication skills training on medical students should also include an examination of patient outcomes such as satisfaction with student interactions.

Since the review by Anderson and Sharpe (1991), a few noteworthy studies have been published assessing the effect of interpersonal skills training on empathy. These studies have included direct observation of student skills along with the use of a comparison or no treatment control group.

Higgins (1990) utilized a two-factor crossover design to investigate the effect of empathy skills training on medical students' responses to simulated patients portraying emotionally intense situations. The study also explored the interaction between empathy and students' perceived stress. Thirteen second-year volunteers were randomly assigned to one of two groups: training with follow-up, or control with delayed training. The experimental intervention consisted of four 3-hour weekly sessions in empathy training. Approaches utilized during the training included lectures, modeling, films, and practice videotaping with peers, selected readings, role playing situations, group exercises, feedback, and discussion. Three testing occasions were completed by each participant. As a pretest, both groups participated in a 15-minute videotaped interview with an actor who portrayed an angry, fearful, or grieving patient. Each medical student then completed

measures of empathic understanding using the 1962 Empathic Understanding Subscale of the Barrett-Lennard Relationship Inventory (BLRI) and also a measure of perceived stress developed by the investigator. Each simulated patient rated the medical student's level of empathic understanding with the patient form of the Empathic Understanding Subscale of the BLRI. Communicated empathy was rated by two trained observers using Carkhuff's (1969) Empathic Understanding in Interpersonal Process 5-point Scale. Following the pretest, the first group underwent the experimental intervention while the second group served as a wait-list control. All participants then underwent a second taped interview and completed the self-report measures again. Group two then received the empathy training while the first group received no further treatment intervention. Upon completion of the second group's training, all participants were tested a third time concluding the experimental procedure.

A series of 2 x 2 ANOVAS tested at the .05 level of significance revealed that following the treatment intervention, the initial training group demonstrated a significant increase in their ability to empathically communicate with emotionally intense simulated patients as a result of the short empathy course. This was made evident by the ratings of videotapes measuring students' communicated empathy and on the students' self-report of empathic understanding (BLRI Empathic Understanding Subscale). In addition, their perceived stress concerning these emotionally intense encounters was reduced. These results were not demonstrated in the control group of students who had been enrolled in regular medical classes. After participating in the empathy training, however, the students in the control group (delayed-treatment) also

demonstrated a significant increase in empathy scores and a significant decrease in perceived stress. Results from a short follow-up for subjects who received the initial training showed that these effects were maintained. In regards to the simulated patients' ratings of empathy received from the students, results showed that when the two groups' scores were collapsed and compared immediately pre- and post-training, the students were rated by the patients as being significantly more empathic.

Higgins' (1990) study was thought to be significant to the present study as it also conceptualized the construct of empathy as a process involving the three distinct phases described by Barrett-Lennard (1981). Hence, the study's results served to add validity to the empathy cycle operating within the physician-patient relationship. However, whether or not these results can be generalized to interactions with actual patients remains questionable.

Evans et al. (1989) conducted a study using a randomized pretest-posttest control group design to evaluate history-taking skills and empathic abilities of fourth-year medical students. This study was part of a larger evaluation of the effectiveness of a consulting skills course for medical students. The course consisted of two components: a series of five one-hour lectures on communication theory to include empathic responding skills and three two-hour skills workshops. The skills workshops, which came after the lectures, consisted of small groups of up to six students utilizing discussions, role-plays, videotaping with real and simulated patients, and interpersonal process recall to help develop specific consulting skills and empathic responses. The dependent variable consisted of objective ratings by

trained observers of videotaped student-patient consultations utilizing an interaction scale derived from Verby, Holdern, and Davis, 1979. The variables assessed by the scale included, in part, the use of facilitation, empathy, warmth, discussion of personal issues, and the use of appropriate silences. Results demonstrated that after attending the lecture series, experimental group students were rated significantly better than control group students at beginning and ending their interviews, used a more flexible questioning style, and were significantly less likely to use multiple or leading questions.

After workshop attendance, experimental group students achieved interview behaviors that were generally significantly better than those of the control group students. They maintained their superiority at beginning and ending interviews effectively, coupled with more effective questioning style. In addition, these students now displayed significantly greater skills in expressing empathy with the patient, using appropriate silences and discussing personal issues. Such data suggest that small group workshops are the most effective teaching format for the range of microskills that underlie effective interview behaviors.

A within-groups comparison demonstrated that experimental group students increased their mean scores on most variables across the three trials. In contrast, control group students demonstrated far smaller increases in mean scores and on some variables showed small decreases. These variables were coverage of patients' psychosocial concerns, use of empathy statements, and interview ending. Evans et al. (1989) argued that such data suggest that students not given specific training in basic communication skills do not improve their interaction style and in

some important areas such as empathy, tend to get worse during this early phase of their clinical education. This finding concurs with previous research by Maguire (1984) and Preven, Kachur, Kupfer, & Waters (1986) which indicated that over the course of their medical education, students not given communication skills training lose interest in and ability to elicit patients' anxieties and concerns regarding their illness experiences, focusing instead on patients' pathophysiological complaints.

Based upon Evans et al.'s (1989) findings that students given specialized communication skills training relate more effectively with patients and demonstrate more empathic responses, it was hypothesized by Evans et al. (1991) that these trained students would be able to elicit from patients more diagnostically relevant information than students who had not experienced the training. To test their hypotheses, Evans et al. (1991) conducted a post-hoc analysis of the final videotaped interviews obtained during the 1989 study. Thirty videotapes (15 from both trained and control group students) were randomly selected and independently rated by a psychiatrist and a general practitioner to evaluate students' diagnostic efficiency. The scale utilized was derived from the Brockway medical rating scale and evaluated students' interview behaviors on the following dimensions: introduction to the interview situation, processing of the patients' medical problems, instruction to the patient and information transmission, summary of session, and overall evaluation. Within these five categories, 21 variables were assessed. Results indicated that students in the trained group were rated to be significantly more diagnostically efficient on the five major categories mentioned above. More specifically, on the variable of "patient

understanding," observers indicated that trained students show greater skill at eliciting how patients feel about their illnesses, an important variable in understanding patient behavior in relation to illness and illness management (Meichenbaum & Turk, 1987). Further, on the variable labeled "clinical perspective," in which the observers are asked to evaluate students' overall grasp of the presenting illness, symptomatology, etiology, and care, trained students were rated significantly more clinically proficient than control group students. This difference between groups was attributed to the trained students' overall communication effectiveness and empathy, exploration of relevant medical issues with patients, and elicitation of greater quantity and quality of information from patients. Such findings suggest that training in communication skills which include the development of empathic understanding of patients' concerns are important contributors to the diagnostic efficiency of medical students in their interviews with patients.

A more recent study published by Evans, Stanley, & Burrows (1993) evaluated a two-stage measurement technique for empathy following the consulting skills training course for medical students. The technique included a paper and pencil test (Interpersonal Reactivity Index) to measure the cognitive and emotional components of the empathy construct and the independent observer ratings of medical students' actual interview behaviors to measure the behavioral component of the empathy construct. All data had been collected during the original evaluation project reported by Evans et al. (1989).

Scales used in the Evans et al. (1993) study to rate the videotapes were the Truax and Carkhuff Accurate Empathy Scale (1967)

which measured students' empathy, genuineness, and warmth and five items from the 16-item History-taking Interview Rating Scale by Verby et al., (1979). Results indicated that students' mean scores on the IRI did not differ over time nor between groups. The observer ratings of students' scores on the Accurate Empathy Scale across the three interview times (pre-training, following trained students' lectures, and following trained students skill workshops) showed that students in the trained group received significantly higher ratings of empathy pre-training to post-lectures, compared with the control group. Group means on genuineness and warmth did not differ across time nor between groups.

Observer ratings of students' scores on the five items from the History-taking Rating Scale showed greater discrimination than the Accurate Empathy Scale (9-point) between the experimental and control groups. Of the five items from the History-taking Rating Scale, three showed significant differences between groups over the course of the evaluation. The trained students achieved a significantly higher mean score post-lectures on the variable psychosocial concerns, relative to the control group. This indicated that trained students were significantly more effective at eliciting patients' social and personal concerns than the control students. The empathy item, which referred to students' depth of understanding and ability to communicate it, also significantly discriminated between the two groups over time. Comparison of mean scores showed that trained students achieved a steady increase in empathy compared with the control group students, who achieved a steady decrease in empathy. The third and final item to facilitate discrimination between the trained and control group students was the use of silence as a means to encourage patients to talk.

Evans et al. (1993) concluded that a possible explanation for no significant mean difference between groups on the self-report IRI measure might be that both groups had similar levels of empathy prior to participation in the study. However, the consulting skills program increased trained students' ability to effectively display empathy behavior, as noted by the observers. Hence, students may have been able to develop a skill they already possessed to the extent that it was discernible to the observers who were rating their videotaped interviews. As a paper-and-pencil test, the IRI was insensitive to the behavioral dimension of empathic responsiveness. Evans et al. (1993) further noted that the cognitive, affective, and behavioral dimension of empathy may be such that a single empathy test cannot measure changes in students' understanding, motivation and behavior. The authors noted that research studies exist which have shown low correlations between subjects' empathic concern (as measured by attitude tests) and subsequent willingness to discuss personal issues with patients (Hammond & Kern, 1979) and studies demonstrating low correlations between subjects' responses to empathic trigger tests and subsequent interview behaviors (Elliott et al., 1982; Robbins et al., 1979). Such studies attest to the need for researchers to include objective behavioral assessments along with self-report measures when evaluating the empathy construct (Evans et al., 1993).

Similar recommendations have been made by other researchers concerning the need for objective evaluation of skills of trainees (Betchart, Anderson, Thompson, & Mumford, 1984; Gask, Goldberg, Lesser, & Millar, 1988; Simpson et al., 1991). Gask et al. (1988) noted that relatively few studies evaluated change in interviewing by the rating of

skills using videotaped sessions with real or simulated patients. Novack et al. (1993) in their review of interviewing skill courses in U.S. medical schools, found that 76% used staff observations of students' interview skills as the primary method of evaluation. Only a minority used standardized evaluation procedures, such as interview evaluation tools and objective standardized clinical examinations with real or simulated patients.

Jarski, Gjerde, Bratton, Brown, and Matthes (1985) suggested that studies designed to examine changes in students' empathy should not only have objective measures by external raters but should also include the perception of patients because patients' ratings are closely related to therapeutic outcomes (Barrett-Lennard, 1962). Based on his findings, he recommended the Barrett-Lennard Relationship Inventory for use in medical settings. He also suggested that objective ratings of empathy, such as Carkhuff's 1969 rating scale, be completed by professionals trained in scoring them. Such considerations were incorporated into the methodology of this study.

Part II

Empathy and the Terminally Ill Cancer Patient

Empathic understanding and communication by physicians is essential to caring for the terminally ill cancer patient (Katz, 1984; Spiegel et al., 1981). Patients suffering from metastatic breast cancer, for instance, have been reported to experience depression, anger, anxiety, feelings of worthlessness, attitudes of hopelessness, and reduced self-esteem accompanying cancer recurrence and treatment

(Bahnsen, 1975; Lewin & Bloom, 1978; Telch & Telch, 1986). In order for physicians to assess and help relieve patients' emotional distress, provide information and explanations, and assist patients in making final decisions, the physician must establish and maintain an ongoing open line of communication (Katz, 1984). However, anecdotal and descriptive reports indicate that dealing with dying patients is inherently stressful for physicians because of the conflict between the curative goals on which most training is based and palliative and/or supportive goals of cancer care; because of inadequate training in communication skills; because of the difficulty of dealing with patients' reactions of anger, fear, depression or withdrawal; and because of the cumulative impact of frequent deaths (Masterson-Allen, Mor, & Monteiro, 1985; Schulz & Aderman, 1976). Because of such reasons, physicians often tend to avoid such situations, leaving patients feeling isolated and psychologically abandoned (Katz, 1984). The physicians' avoidance behavior itself serves as an additional source of stress reminding them that they are not adequately caring for their patients' emotional needs.

Similar to the stress experienced by practicing physicians, medical students have also reported difficulties in dealing with the intense emotions surrounding patients' suffering and death (Firth, 1986; Firth-Cozens & Morrison, 1989). When confronted with seriously ill or dying patients, Knight (1983) found that medical students experienced feelings of insecurity, anxiety, hostility, and destructive argumentativeness, as well as a sense of guilt and helplessness. In order to cope with such adverse feelings, students may deny their own

pain (Slevin, 1987), appear aloof or insensitive avoiding the obviously painful issues, or become inappropriately optimistic (Heavy, 1988). Hornblow et al. (1988) concluded that medical students should receive systematic training in how to deal specifically with emotionally laden encounters such as those inherent in the care of the terminally ill patient. To date, there has been a paucity of research evaluating programs of this nature.

Death Anxiety

Cassidy (1986) suggested that the distress caused by dealing with intense emotions associated with terminal illness (e.g., fear, grief, anger) is due to the fact that caregivers are reminded of their own mortality. The anxiety surrounding thoughts of one's own death has been referred to as death anxiety within the field of death education (Lonetto & Templer, 1986). The measurement of death anxiety or death attitudes has often proceeded in the absence of any theoretical or formal definition of the construct. Schulz (1979) has provided a clear definition of death anxiety:

The terms fear and anxiety have been used here interchangeably. A distinction often made by psycho-analysts is that fear is experienced in reference to specific environmental events or objects while anxiety is a negative emotional state that lacks a specific object. The apprehension evoked by thoughts of death and dying has properties of both fear and anxiety. There are specific things one can fear, such as the pain and associated psychological suffering. In addition, thinking about death may arouse amorphous and unspecified anxieties about the many unknowns associated with death: we do not know when, or how we will die, or if there is an afterlife. The idea of not being is for some persons incomprehensible and unsettling. (pp. 69-70)

Research within the field of death and dying has acknowledged that the difficulties met by the terminally ill patient may be exacerbated by

the failure of physicians and other health care workers to deal with their own personal reactions relative to death anxiety or fear of death (Glaser & Strauss, 1966; Kastenbaum & Aisenberg, 1972; Knight, 1983; LeShan & LeShan, 1961). Studies have demonstrated that the avoidance behaviors, detachment, and emotional withdrawal of physicians are common coping strategies associated with death anxiety (Lonetto & Templer, 1986; Neimeyer, 1988). Such defense mechanisms may mediate the enormous burden of death anxiety but at the same time, serve to block empathic communication with the dying patient. In a descriptive British study of final-year medical students' self-reported attitudes and behaviors toward dying patients, Field and Howells (1988) found that medical students with a high personal fear of death were significantly more likely to describe difficulty in discussing the prognosis with a dying patient and reported more personal psychological problems in dealing with dying patients. Neimeyer, Behnke, & Reiss (1982) reported that medical residents high in death threat were more likely to use denial and avoidance when faced with dying patients. As many dying patients desire to discuss their feelings about death (Kubler-Ross, 1969; Wass, 1979), medical students need assistance in facilitating supportive interactions and in understanding their own personal responses to loss and anxieties about death and dying.

Self-awareness is considered by many thanatologists to be an essential prerequisite to intelligent, compassionate interaction with dying or bereaved individuals (Corr, 1979; Grady & Strober, 1980; Pike, 1990). Corazzini (1980) contends that before individuals can help another person with grief work, they must have accepted their own

mortality, as well as that of others, must have acknowledged their own losses, and must have successfully resolved their own grief.

Counseling theory posits that individuals must be open to and accepting of their own experiencing in order to be an empathic listener with others who share similar experiences (Rogers, 1959). However, the ability to be consciously aware of self may be thwarted by the presence of anxiety. Anxiety may contain both overt feelings of fear and apprehension (Schulz, 1979). Rogers viewed the *etiology* of such feelings of fear and apprehension as resulting from a process of disintegration. He emphasized self-consistency and congruence between self and experience. When an individual experiences a discrepancy between perceived self (or one's self-concept) and actual experience, a state of incongruence results. This state of incongruence renders the individual vulnerable to anxiety with feelings of diffuse apprehension, fear, and internal turmoil. Anxiety is the result of the discrepancy between experience and perception of self. In order to maintain congruence between self and experience, the individual may deny to awareness certain threatening experiences or distort the meaning of experience. The results of distortion or denial of experience are decreased self-awareness and inability to empathically understand others who present similar threatening experiences.

Tomer (1992) suggests that the etiology of death anxiety might be understood in light of Rogers' concept of defense. If an individual's perceived self or self-concept depends on the conditions of good health and "being alive," awareness of approaching death might be construed as a threat. Denial or distortion of the awareness of one's mortality would

then be necessary in order to prevent the discrepant experience from entering consciousness and causing feelings of fear and apprehension which Schulz (1979) mentioned as overt manifestations of death anxiety. Individuals who distort or deny their own experience of mortality will be unable to empathically help others gain understanding and acceptance of the dying process. From the Rogerian perspective, medical students who have not confronted their own inevitable mortality along with the fearful thoughts and anxieties about the many unknowns associated with death may become highly apprehensive when exposed to the care of terminally ill patients and react with avoidance behaviors and poor empathic communication.

Death Education Research

During the past two decades, educational programs have been developed in an effort to assist students to gain a personal understanding of the dying process and the psychosocial issues pertinent to the care of terminally ill patients. Death education programs have been offered to high school, college, and nursing students, health care workers, and adults from the community. Programs evaluated in the literature have consisted of specialized training sessions, workshops, complete college courses, and mini-courses that involve educational units offered within the context of a semester-long course.

In the considerable majority of these published studies addressing the psychological effects of diverse death education courses, the major dependent variable has been a change in the level of the participants' anxiety about death (Durlak & Riesenber, 1991). The results of these studies tend to be marked by a great deal of inconsistency. Some reports

document a reduction in death anxiety associated with programs of death education (Glass, 1990; Laube, 1977; Lester, Getty, & Kenish, 1974; Leviton & Fretz, 1978-79; Lockhard, 1989; Murphy, 1986; Murray, 1974; Trent, Glass, & McGee, 1981; Wilkinson & Wilkinson, 1986-87). For example, Lockhard (1989) reported that nursing students who participated in a two-week didactic and experiential instructional unit which included 7 hours of classroom instruction plus outside assignments had a significantly lower death anxiety level (assessed by Templer's Death Anxiety Scale [DAS]) immediately after the unit, four weeks after the unit, and one year after the unit than those students who had not participated. In an earlier quasi-experimental study by Murphy (1986), registered nurses who attended a 16-hour two-day workshop on death and dying demonstrated significantly decreased levels of death anxiety as measured by Templer's DAS. The workshop was primarily experiential with high levels of interaction and emotionally impactful stimuli including films, discussion groups, and a live interview with a terminally ill patient, as well as other speakers.

In other studies, no significant difference in death anxiety was found following death education (Bailis & Kennedy, 1977; Hopping, 1977; McClam, 1980; Peace & Vincent, 1988; Rigdon & Epting, 1985). For example, McClam's (1980) study included licensed practical nurses, registered nurses, nursing assistants, ministers, teachers, education directors, social workers, physical therapists, counselors, psychologists, speech pathologists, and medical secretaries. A two-day workshop was presented to this heterogeneous group of subjects which included films, discussions, and awareness exercises. No significant differences in Templer's DAS scores were found at posttesting or a

four-week follow up testing. Yarber, Gobel, and Rubler (1981) also reported no significant difference in death anxiety scores between senior nursing students who participated in a semester-long death education course and a no-treatment control group. The course included value clarification, readings, audiovisual aides, interaction with those who work with dying patients and families, and field trips to death-related facilities.

In still other studies, death education reportedly was associated with an increase in death anxiety scores or with equivocal results (Combs, 1981; Hardt, 1975; Hayslip & Walling, 1985-86; Johansson & Lally, 1990-91; Mullins & Merriam, 1983; Wittmaier, 1979-80). Using a posttest-only control group design, Wittmaier studied the effect of an intensive three-week death and dying course on college students' death anxiety level. The format of the course was primarily didactic, however discussion of personal reactions was encouraged. Results indicated a significant increase in death anxiety as measured by Templer's DAS scores compared to the control group.

Johansson and Lally (1990-91) employed an experimental pretest-posttest control group design to examine the efficacy of a death education program designed to lower the level of death anxiety in junior and senior year baccalaureate nursing students. The experimental design was as diagrammed:

	<u>Treatment Groups</u>	<u>Pretest</u>		<u>Posttest</u>
R	Senior experimental	O ₁	X	O ₂
R	Senior control	O ₃		O ₄
R	Junior experimental	O ₅	X	O ₆
R	Junior control	O ₇		O ₈

In their study, death anxiety was conceptualized as a transitory emotional state in response to an explicit death experience. The construct of death anxiety was operationally defined as the score on the State Form of the State Trait Anxiety Inventory (STAI). The State Form of the STAI is used to measure state anxiety which is defined as a transitory emotional state or condition of consciously perceived apprehension and tension (Johansson & Lally, 1990-91). The instrument was administered after participants viewed a pretest film depicting a death experience and again following a similar posttest film. Although the pre- and posttest films differed in content, both provided an immediate image which was intended to evoke spontaneous feelings. The death education program was primarily experiential in nature consisting of five weekly, one-hour audiovisual presentations (films, audio-cassettes, taped interviews) followed by guided group discussions. Results of a 4 (group) x 2 (test occasion) ANOVA revealed no significant differences between the treatment groups. However, there was a significant interaction effect between the treatment and level of the student (junior vs. senior). A post hoc analysis using Tukey's HSD test of differences between means, with a significance level of .05, revealed that the posttest mean death anxiety score of the senior experimental group was significantly different from that of both the junior experimental and control groups, but not that of the senior control group. The posttest mean death anxiety score of the junior experimental group was significantly different from that of the senior experimental and control groups as well as the junior control group.

The correlated t-test was used to examine the change scores for each treatment group with a significance level of .05. The mean death anxiety score of the senior experimental group significantly decreased from pre- to posttesting. There was no significant change in the mean death anxiety score of the senior control group from pre- to posttesting. The mean death anxiety score of the junior experimental group increased, although not significantly, from pre- to posttesting. However, there was a significant decrease in the mean death anxiety score of the junior control group from pre- to posttesting.

Johansson and Lally (1990-91) attributed the discrepancy found in the effect of the death education program on death anxiety of juniors and seniors to prior clinical experience. Senior students had undergone supervised clinical experience with dying patients whereas juniors had not. The authors suggested that a death education program that portrays death experiences through audiovisual materials but does not provide clinical experiences with the dying, may actually *increase* the death anxiety of some students. They further contended that such an educational intervention should be provided during clinical experiences with the dying to allow students to process their feelings and reactions to these experiences and thus decrease their death anxiety.

Johansson and Lally (1990-91) suggested that the findings of their study might explain one reason why results from prior research evaluating the effectiveness of death education programs have been contradictory. Participants in these programs may have differed in important characteristics such as clinical experience, which affected the impact of the programs in reducing death anxiety. These authors

concluded that supervised clinical experience with dying patients may be the most important part of a relevant death education program. They recommended that death education programs should be made available at the same time nursing students are having their first supervised clinical experience with dying patients. However, the results of the Johansson and Lally study must be considered cautiously in light of the fact that they did not employ an instrument specifically designed to measure the construct of death anxiety such as Templer's Death Anxiety Scale or the Collett-Lester Fear of Death Scale. Hence, the construct validity of the scores obtained on the State Form of the STAI used in their study as a measure of death anxiety may be considered suspect.

Another underlying factor which might help explain the discrepancies found in the literature concerning the effects of death education on death anxiety may be differences in *styles* of death education (Combs, 1981). A few studies have compared the impact of various types of death education interventions. For example, Vargo and Batsel (1984) compared the effects of an experiential format with that of a didactic format. The results of this study indicated that the experiential group showed a greater reduction in death-related fears than the didactic group. Similarly, Durlak (1978-79) also compared the effects of didactic and experiential formats on death anxiety. While Templer's DAS scores of both groups increased, the Lester Fear of Death score decreased for those in the experiential group but rose for those in the control and didactic groups. Thus, both studies appeared to indicate that the more experientially based courses had a greater death fear/anxiety reduction than the didactic format.

The findings of the above two studies were supported by the meta-analysis of Durlak and Riesenbergr (1991) who reported that experiential programs tended to be associated with decreased death anxiety and fear while didactic programs were associated with increased anxiety and fear. In the meta-analysis, studies from 1975 to 1987 were classified into either primarily didactic or experiential interventions. The didactic programs attempt change by increasing cognitive awareness and understanding of death-related issues. Lectures, media presentations, and large group discussions are typically used for this purpose. Experiential programs (role-playing, fantasy, and simulations) are introduced to induce exploration and sharing of personal feelings and experiences. Out of 40 death education programs categorized as either didactic or experiential, Durlak and Riesenbergr found that experiential programs ($n = 26$) achieved significantly better affective outcomes, i.e., less death anxiety or fear (mean ES = 0.33) as compared to didactic programs ($n = 14$; mean ES = -0.04). Also, half of the didactic programs produced negative effects. In other words, in 50% of didactic programs, participants left feeling more fearful or anxious about death than when they had entered. It was suggested by these authors that experiential programs be favored over didactic programs if the aim is to modify participants' feelings about death. No study to date has examined the effectiveness of combining didactic and experiential components into an integrated program of death education with medical students.

Durlak and Riesenbergr (1991) cite a number of methodological problems which existed in the death education studies reviewed. Random assignment of groups to treatment conditions was done in only 14 out of

47 programs, only 9 used placebo or waiting list controls, and only 7 conducted follow-up. Although 23 studies used multiple outcome measures, only 12 of these relied exclusively on reliable measures to assess change. Also, all studies relied exclusively on self-report measures to assess change, with many of these measures having unknown psychometric properties.

A number of recommendations were given by Durlak and Riesenber (1991) to improve the adequacy of future evaluations. First, program goals and instructional techniques must be operationalized by death educators. Goals must be clearly described along with program content. Further, these goals and instructional methods should become more theoretically based. Second, investigators must limit their choices of outcome measures to those with the soundest psychometric properties. Third, behaviorally oriented techniques are needed to monitor students' progress in facing and coping with death more effectively. Important behavioral changes might include: (a) ability to express personal feelings about death, (b) more contact with terminally ill persons, (c) improved communication skills and comfort in dealing with death-related situations. Durlak and Riesenber conclude that the use of standardized behavioral assessments coupled with valid self-report measures would provide a more comprehensive evaluation of the goals of death education than is currently available.

The majority of studies evaluating formal death education programs have focused on college and nursing students. Formal instruction in death education for medical students has been acknowledged as being necessary to help students cultivate knowledge, attitudes, and skills

necessary to deliver supportive, humane bedside care to seriously ill patients (Mermann et al., 1991). Yet, a recent survey by Holleman et al. (1994) indicated a substantial lack of attention devoted to the dying process in the curriculum of many U.S. medical schools. Out of 101 respondents, 27% reported only one hour or less required class time devoted to the dying or grieving process, and 37% reported two to three hours. More than one third of respondents described their preparation as "ineffective," and only 3% described it as "very effective." Holleman et al. concluded that many North American medical schools need to improve the quality of instruction in the area of death education. They cited Yale University School of Medicine as currently implementing a promising model of instruction in death education. Within this model, as described by Mermann et al. (1991), medical students are assigned to patients with life-threatening illnesses. The role of the student is to gain an understanding of what it means to be sick and perhaps dying by developing an ongoing relationship with a patient who is willing to share his/her experiences of having a serious illness. Over a number of months, the student learns from the patient "teacher" the personal impact of dying, coping techniques employed, spiritual concerns, and what characteristics patients consider important in physicians who care for them. These sessions, along with weekly small group discussions facilitated by an instructor, serve to demystify the process of dying as well as help students learn to talk comfortably with those who are ill and suffering (Mermann et al., 1991). Such an intervention suggests that death education programs may hold the potential for both lowering death anxiety and enhancing empathy in students. Although there has been no

reported empirical study to date as to the effect of such a teaching model on students' death anxiety levels and empathic communication skills, such an endeavor appears timely and warranted. The present study included the development of an ongoing relationship with a terminally ill patient and the processing of this relationship with an instructor.

Chapter 3

METHODOLOGY

Anderson and Sharpe (1991) cited the following methodological concerns as limitations in the communication skills training studies they reviewed: (a) incomplete description of interventions used, (b) the absence of any underlying conceptual model or theory guiding the selection of intervention strategies and communication behaviors and, (c) the use of simulated patients with whom the medical students practiced interpersonal communication skills. In order to address these methodological concerns, the present study offered a complete description of the educational intervention to include the duration and frequency of interventions. Further, the study used the designed conceptual model (Figure 1) to guide the selection of intervention strategies and outcome variables. Also, real patients interacted with medical students during the experiential component of the treatment intervention to increase generalizability of the study's results to actual clinical situations.

Durlak and Riesenbergr (1991) cited the following methodological problems which existed in the death education studies they reviewed: (a) lack of random assignment of groups to treatment conditions, (b) infrequent use of a placebo or waiting-list control group, and (c) the exclusive reliance on self-report measures to assess change, with many of these measures having unknown psychometric properties. Durlak and Riesenbergr suggested that standardized behavioral assessments be employed along with valid self-report measures to provide a more

comprehensive evaluation of death education interventions. In order to address these methodological concerns and recommendations, subjects in this study were randomly assigned to experimental and comparison groups. The comparison group will receive a condensed version of the experimental intervention following the conclusion of the study during the fall semester. This was planned to control for the internal validity threat of demoralization of the control group. Also, as recommended by Durlak and Riesenber, instruments used to assess change in the study were those with established reliability and construct validity, and those which have previously been used with medical students. Further, assessment of treatment effects were made by valid self-reports *coupled* with an objective behavioral assessment of student-patient interactions on videotapes. These tapes were rated by trained observers using a standardized rating scale. Also, as suggested by Jarski et al. (1985), the study included an assessment of the patients' perceptions of empathy received from medical students, as patients' ratings have been found to be related to therapeutic outcomes (Barrett-Lennard, 1962).

Research Design

The design of this study was an experimental pretest-posttest comparison group design with random assignment of subject to groups.

The paradigm for this proposed design is illustrated as:

Experimental treatment	R	O_1	X_1	O_2
Comparison treatment	R	O_3	X_2	O_4
		Pretest		Posttest (10-week posttest)

in which R indicates random assignment of subjects, X_1 indicates the experimental treatment condition, X_2 indicates the comparison treatment condition, and O represents testing using the research measures. In this design, all subjects were randomly assigned to one of the two treatment groups and then measured on the dependent variables as a pretest. The first group received the experimental treatment condition consisting of the integrated didactic and experiential instructional seminar in conjunction with weekly relationship-building sessions with a terminally ill cancer patient. The second group received the comparison treatment condition consisting of weekly relationship-building sessions with a terminally ill cancer patient without the instructional seminar intervention. Measures were then collected for all subjects following the ten-week treatment interventions.

The Independent Variables

The independent variables for this research study consisted of the *type* of treatment condition offered to the medical students and *testing occasion*. Occasion refers to the time when the dependent measures were administered. There were two levels of occasion: pretest, and posttest.

The two types of treatment conditions were the experimental treatment condition and a comparison treatment condition. The experimental treatment condition consisted of the combined didactic and experiential death education/empathy training program in conjunction with weekly relationship-building sessions with a terminally ill cancer patient. The comparison treatment condition consisted of the weekly relationship-building sessions with a terminally ill cancer patient without any educational intervention.

The elective death education course was designed for second-year medical students in an osteopathic medical program. (See Appendix A.) The course included a focus on empathy development and communication skills training specifically related to interaction with terminally ill cancer patients. The death education program consisted of 10 weekly three-hour combination didactic and experiential seminars in which objectives from the cognitive domain, the affective domain, and the behavioral domain were addressed. These three domains were cited as important in the development of death education courses (Stillion, 1979).

The didactic component of the weekly seminars focused on meeting the cognitive objectives, with each lecture/discussion period lasting one hour. Students developed intellectual understanding and skills within the following topic areas: (a) the nature of crisis and loss, (b) psychological factors in the process of dying, (c) the nature of death anxiety, (d) the patient-centered model for medicine, and (e) empathic communication with dying patients.

Learning objectives within the affective and behavioral domains were accomplished within the experiential component of the seminars. Affective objectives consisted of the development of self-awareness in each student and empathic understanding of the dying patient's experiences. To achieve these, each student was assigned to work with a person who has metastatic cancer. Over a period of 10 weeks, the students developed a facilitative relationship with their patients based upon an intervention model similar to that described by Mermann et al. (1991). Each week the students met with their assigned patients for a

40-minute videotaped session and attended a two-hour experiential processing seminar led by the course instructor. The weekly processing seminars were scheduled to immediately follow the concurrent didactic seminars. During the processing seminars, students reviewed their videotapes with the instructor and received immediate verbal feedback regarding the student-patient relationship. The focus was on both the students' empathic developmental needs and the psychological needs of the patients.

Within the experiential processing seminars, students also met the behavioral objective of developing and accurately communicating empathic responses to their patients. Students learned and practiced interpersonal communication skills based on the relationship model used in teaching counseling students at Drake University since 1990. Skill development was assessed by the instructor during the weekly processing of student-patient videotapes. During the 10 weeks of patient contact, students' tapes were also reviewed outside of class by the course instructor with written feedback given the following week.

In summary, the experimental treatment condition consisted of the following student activities occurring over a 10-week period: a weekly three-hour instructional seminar consisting of a one-hour didactic component and a two-hour experiential processing component. In addition, 10 weekly videotaped student-patient sessions were included to allow students to practice their relationship-building skills. The students who received the comparison treatment condition did not receive any death education or empathic communication skills training seminars. The intervention consisted only of meeting with a terminally ill cancer

patient weekly for a 40-minute relationship-building session over the 10-week study period. No verbal or written feedback by the course instructor was provided. The purpose of including such a treatment condition was to provide a situation which resembled that which "naturally occurs" at present when students enter into their clinical rotations during their third year. They interact with patients having had minimal training in communication skills, particularly in regard to the psychosocial needs of the terminally ill patient. However, as the variable of meeting with patients does not occur during the second year, by definition, this intervention was considered to be a treatment condition in the present study, as opposed to being considered a no-treatment control group. The intent of the study was to determine if the *instructional seminar* teaching model (which included the practicing of learned empathy skills during weekly student-patient sessions) was more effective in reducing students' death anxiety levels and in enhancing their empathic ability than mere "experience" in interacting with a terminally ill patient without such formal instruction.

The Dependent Variables

The first dependent variable for the study was death anxiety. Death anxiety refers to "amorphous and unspecified anxieties about the many unknowns associated with death: we do not know when, where, or how we will die, or if there is an afterlife" (Schulz, 1979, pp. 69-70). For the purpose of this paper, death anxiety was operationally defined as the scores on the Templer Death Anxiety Scale (DAS) which measures generalized death anxiety at a conscious level. (See Appendix B.)

The second dependent variable was empathy. Empathy was considered to be a process consisting of three phases as suggested by Barrett-Lennard (1981). Phase one refers to the inner process of empathic listening and understanding by the clinician. Phase two refers to the communicated or expressed empathic understanding by the clinician. The third phase of the empathy cycle is received empathy by the client.

In this study, empathy experienced by the medical student was operationally defined as a score on the clinician form (MO) of the Empathy Scale of the Barrett-Lennard Relationship Inventory (Barrett-Lennard, 1962). Communicated empathy was operationally defined as the degree to which medical students' statements express empathic understanding as measured by Truax and Carkhuff's (1967) 9-point scale. Received empathy, or how empathic the patient perceived the medical student to be, was operationally defined as the score on the client form (OS) of the Empathy Scale of the Barrett-Lennard Relationship Inventory (Barrett-Lennard, 1962).

Subjects

Population and Samples

The target population in this study was medical students. The accessible population was second-year medical students at the University of Osteopathic Medicine and Health Sciences, Des Moines, Iowa. The actual sample consisted of 27 volunteers who were randomly selected from a total of 35 second-year medical students who demonstrated interest in attending the course. There were 14 males and 13 females who participated with a mean age of 28 years.

Recruitment and Selection

Twenty-seven students were recruited from the second-year medical class following permission being granted by the U.O.M.H.S. Dean of Academic Affairs and the Curriculum Committee. A presentation was made to the entire class inviting the students to take part in a study, the purpose of which was to examine the various ways in which medical students respond interpersonally with terminally ill cancer patients. They were told that the study involved an elective pilot course in which didactic and experiential learning of both death education and empathic communication skills would occur. They were further informed that, as part of the study, they would have the opportunity to meet and form an ongoing relationship with a patient who had been diagnosed with metastatic cancer. Those in the comparison group were also assigned a cancer patient for ongoing sessions as was the experimental group, but did not attend the didactic or processing seminars nor receive feedback on their videotapes. Their tapes, however, were monitored by the course instructor. Students who were currently receiving counseling or psychotherapy were asked not to volunteer as such interventions would serve as a confounding variable in the study. Likewise, students who were presently experiencing the loss of a significant person in their lives through illness were asked not to participate. Information concerning the course dates and the procedure for enrollment was explained and any student questions were answered.

Course Faculty

The didactic lecture/discussion and experiential processing seminar components of the experimental intervention were taught by a

Drake University Professor of Counselor Education who holds a Ph.D. in Counselor Education. He has had 33 years of teaching experience within the field of counseling and 15 years of clinical experience counseling dying patients and their families.

Selection of the Raters

Two practicing mental health counselors were chosen as raters of empathic responding as measured by the Truax and Carkhuff Scale. One counselor holds a Ed.D. in Counselor Education and professional licensure. The second counselor holds a M.S. in Mental Health Counseling. Both raters have had at least 100 hours of training in empathic responding and were experienced in rating videotapes using the Truax and Carkhuff method.

Observer Reliability Training and Evaluation

Although both raters have had previous experience rating videotapes using the Truax and Carkhuff method, a training process was carried out for review purposes and an evaluation was done to ensure that both raters demonstrated consistency between themselves in the rating process. Training consisted of a discussion of the scale to include clarification of the concepts involved at each numerical level on the scale and a review of selected videotapes of counselors in training followed by a discussion of the level of empathy demonstrated in those tapes. The raters were then asked to independently rate over the next week 10-minute segments from 12 tapes selected from actual counseling sessions involving counseling students not involved in the

current study. To determine the inter-rater reliability between the two raters, a Pearson product moment correlation coefficient was calculated. As a satisfactory level of reliability between raters of .84 was established, the training process was considered effective and the experimental rating process then commenced.

Rating Process

Each student-patient session was 40 minutes in length. For the purpose of rating, the initial 5 minutes and the final 5 minutes of each tape was eliminated from consideration because they tend to be atypical of the session as a whole. The remaining 30 minutes were divided into 10-minute segments for ratings. The segments were presented to raters in random order based on a table of random numbers. All segments were rated by both raters. However, raters worked independently of one another and rated tapes at different points in time. The raters were blind to which group the subjects were in, the time of testing, and the nature of the experimental intervention. When all of the ratings were completed, a final inter-rater reliability correlation coefficient was computed to determine the consistency between the two raters. The inter-rater reliability coefficient was .66. This reliability coefficient is slightly lower than the coefficient of .70 which is considered satisfactory for occasions when raters are making inferences or evaluations about the behavior being observed (Borg & Gall, 1989). However, since the coefficient of .66 was close to .70, it was considered to reflect adequate consistency between raters for this study.

Selection of the Terminally Ill Patients

Prior to spring semester 1996, a total of 27 cancer patients diagnosed as terminally ill by their medical oncologists or surgeons were recruited for individual, ongoing sessions with a medical student. Out of the 27 cancer patients that participated, 19 had metastatic breast cancer, 2 patients had metastatic colon cancer, 4 patients had metastatic ovarian cancer, 1 patient had metastatic lung cancer, 1 patient had multiple myeloma, and 1 patient had metastatic melanoma. The average age of the patient group was 57 years with a range in years from 38 to 73.

The oncologists/surgeons selected only those terminally ill patients who were aware of their disease status and possessed the psychological stability to participate in such a research project. The medical and surgical oncologists identify a patient's condition to be terminal when a disease state exists which renders them no longer curable of their cancer by medical interventions. The individual's life span is markedly effected depending on the type of tumor and the location of the metastasis. The terminal or "incurable" state of the disease indicates that the cancer might have progressed to a bone marrow metastasis, or could possibly have recurred as a solid tumor in the lung, brain, bone, liver, or other organs. The medical oncologists who participated in the selection of patients verified to the researcher that patients are told of their terminal or "incurable" status. Therefore, patients with terminal cancer are confronted with the knowledge that they have a limited life span. Some patients may experience a period of remission which implies that the tumor is not

progressing, i.e., their disease is stable. However, the patient is still considered to have an "incurable" condition. As these cancer patients with recurrent disease are dealing with a limited life span and have been told this by their physicians, they were considered to be appropriate candidates for inclusion in the study which focused upon teaching medical students how to empathically communicate with patients experiencing a terminal illness. Other patients suffering a life-threatening disease such as coronary artery disease or severe emphysema were not chosen as participants as they are not confronted with the acute inevitability of a limited life span which daily confronts the terminally ill cancer patient.

Each terminally ill cancer patient who had been selected for the study was given a brief explanation of the study by the physician or his/her nurse. Those patients who were interested in the research study and voluntarily agreed to participate were contacted by the investigator to confirm their interest and asked to meet for an initial interview.

Each volunteer patient met with the investigator of the study individually. The overall nature of the study with specific expectations for patient participation was described. Patients were told that the medical students assigned to them would be learning how to develop caring, empathic relationships with patients such as themselves. The role of the patients during each session was to share whatever was comfortable for them of their illness experience. Patients were told that the students would not be doing any medical assessments but only practicing relationship-building skills. Videotaping of sessions was explained to the patients with an emphasis on using the tapes for

student learning purposes and evaluations only. They were informed that upon completion of their first and last sessions with the students, they would be asked to fill out a self-report instrument measuring how empathic they experienced the students to be. Each patient then read and signed an informed consent form describing the study and was given an opportunity to ask questions and decline participation in the study if desired. (See Appendix C.)

At the completion of the interview, patients were informed that the investigator would be calling them at the beginning of spring semester to arrange their first session time with their assigned medical student. This session also served as the pretest for the study. Sessions were conducted in the medical library at the Azneer Academic Center on the U.O.M.H.S. campus. Although unlikely, if a medical emergency concerning the patient were to occur during the student-patient session, the student was responsible to assist the patient in contacting her private physician. For any other medical emergencies which may have arisen in reference to the student, the Department of Surgery had agreed to assume responsibility.

Assignment of Students to Terminally Ill Patients

As mentioned, students were randomly assigned to either the experimental treatment or comparison treatment group based upon a table of random numbers. When a cancer patient became available for participation in the study, she was assigned to the student whose random number assignment matched the patient's order of presentation.¹ For

¹In some cases, an exception was made because of scheduling problems.

example, the third patient who became available was assigned to the medical student who had been assigned #03 from the table of random numbers. The 13th patient was assigned to the student with #13 from the table of random numbers, etc.

Research Measures

Templer Death Anxiety Scale

The Templer Death Anxiety Scale (DAS) was used as a direct, self-report measure of death anxiety. The DAS (Templer, 1970) measures death anxiety at a conscious level. It consists of 15 true-false items, of which 9 are keyed "true" and 6 "false." Scores may range from 0 to 15, with the higher numbers indicating a greater degree of death anxiety. The normal range of scores is from 4.5 to 7.0 (Templer, Ruff, & Franks, 1971).

In the construction and validation of the DAS, Templer (1970) devised 40 items which were rated by seven judges for face validity. The judges were a clinical psychologist, two graduate students in psychology, and four chaplains in a state mental hospital. They rated the items on a scale from 1 to 5, and the 31 items which received an average rating of 3.0 or greater were retained. These 31 items were administered to 141 students in different colleges in Kentucky and Tennessee. Point biserial correlations were computed, and the 15 items that had significant item-test score correlations were selected for the final DAS. Phi coefficients were used to determine relative independence of items. Since none of the coefficients of correlation between items exceeded .65, Templer concluded that there was not an excessive inter-item redundancy.

The DAS is the most widely used death anxiety scale (Neimeyer, 1988; Wass & Forfor, 1982) and has amassed a considerable amount of normative data. Templer (1970) found a test-retest reliability coefficient of .83 and a coefficient of internal consistency of .76 when the DAS was administered to college students. Warren and Chopra (1978) also found evidence of internal reliability (Chronbach's alpha of .65) when they used an Australian sample.

Templer (1970) demonstrated the construct validity when he found that the death anxiety scores of highly anxious psychotic patients were significantly higher than those of normal control patients. Dickstein (1977) utilized the Death Concern Scale, Templer's Death Anxiety Scale, Tolor and Reznickoff's Death Anxiety Scale, and the Fear of Death and Dying Scale in a study which provided support for the construct validity of those scales. In general, the scales were significantly correlated with each other for both men and women. The median correlations indicated, on the average, approximately 35% common variance among the scales. The authors noted that correlations at the levels obtained indicated that scales were not interchangeable, however.

Templer (1970) demonstrated concurrent validity with a correlation coefficient of .74 between the DAS and the Boyer Fear of Death Scale (Boyer, 1964). McDonald and Carroll (1981) reported a correlation of .55 between the DAS and Dickstein's Death Concern Scale (Dickstein, 1972) and a correlation of .50 between the DAS and the Handal Death Anxiety Scale (Handal, 1969). Vargo (1980) investigated the relationship between Templer's Death Anxiety Scale and the four subscales of the Collett-Lester Fear of Death Scale. Findings indicated moderate correlations

between the DAS and three subscales (Fear of Death of Self, $r = .609$; Fear of Dying of Self, $r = .524$; Fear of Death of Others, $r = .434$). As the DAS was most highly correlated with the Collett-Lester subscales which purportedly measure fear of one's own death and dying, it has been suggested that Templer's scale is not only a measure of death anxiety but also one of fear concerning personal demise in particular (Vargo, 1980). Significant correlations between the scales supported their concurrent validity.

Templer (1970) demonstrated the discriminant validity of the DAS by correlating three measures of general anxiety with each other and with the DAS. These are the Manifest Anxiety Scale (Taylor, 1951), the Welsh Anxiety Scale (Welsh, 1965b), and the Welsh Anxiety Index (Welsh, 1965a). Templer found substantially lower correlations between the DAS and each general anxiety score than correlations with each other.

In addition to its satisfactory psychometric characteristics, the DAS had been found not to correlate with the Crowne-Marlow Social Desirability Scale (SDS) (Templer, 1970). The SDS measures attempts to respond in a socially desirable direction and is one measure of defensiveness in relating feelings and attitudes.

The DAS has been used in a variety of death education research studies involving health care professionals, particularly with registered nurses and nursing students (Hopping, 1977; Laube, 1977; Lockhard, 1989; McClam, 1980; Mullins & Merriam, 1983; Murphy, 1986; Murray, 1974; Peace & Vincent, 1988; Yeaworth, Kapp, & Winget, 1974). Although the DAS has been widely employed in nursing research, there exists a paucity of studies utilizing the scale in evaluating the

outcome of death education with *medical students*. However, two studies using the DAS were located which included physicians along with other health care workers in their death education intervention. Durlak and Burchard (1977) conducted research employing the DAS to measure the outcome of an 8-hour death and dying workshop which combined lecture discussion and experiential components on the death anxiety level of hospital staff members which included a few physicians as subjects. Later, Durlak (1978-79) studied the differential effects upon death anxiety of a similar heterogeneous hospital staff (including a few physicians) of an 8-hour experiential death and dying workshop and an 8-hour didactic workshop.

In general, there exists a lack of empirical studies assessing the effectiveness of death education to reduce death anxiety with medical students. However, the DAS appeared to be a useful instrument to employ in this study as it has been shown to have adequate reliability and validity and has previously been used with health care professionals which included some physicians. Further, there are indications that the DAS measures state, rather than trait, anxiety and is sensitive to environmental influence (Hartshore, 1979; Templer, Ruff, & Franks, 1971). Such qualities make the DAS valuable as an instrument to measure the effects of death education.

The Truax and Carkhuff Accurate Empathy Scale

Communicated empathy was measured by Truax and Carkhuff's 1967 Accurate Empathy Scale. The Accurate Empathy Scale was designed to permit trained observers to reliably rate the extent of accurate empathic understanding that one person has for another. This is commonly

determined from tape-recorded samples of one-to-one personal communication. The scale was designed to measure Truax and Carkhuff's conception of empathy which involves the sensitivity to current feelings, and also, the verbal facility to communicate this understanding in a language attuned to the client's current feelings. The scale includes a description of behavioral criteria for each level of the construct. The construct of empathy as defined by Truax and Carkhuff grew out of the theoretical work of Carl Rogers related to the conditions for therapeutic change (1951, 1957, 1961). The Accurate Empathy Scale reflects Rogers' therapeutic model.

The Scale differentiates nine levels of accurate empathy ranging from an almost complete lack of empathy at stage 1 where the "therapist² seems completely unaware of even the most conspicuous of the clients' feelings (and) his responses are not appropriate to the mood and content of the clients' statements" (Truax & Carkhuff, 1967) to stage 9 where the "therapist unerringly responds to the clients' full range of feelings in their exact intensity . . . he recognizes each emotional nuance . . . and reflects them in his own words and voice. He expands the clients' hints into a full-blown but tentative elaboration of feeling or experience with unerring sensitive accuracy" (Truax & Carkhuff, 1967). Level 4 on the Accurate Empathy Scale is generally considered the minimum necessary for the establishment of effective rapport. This behavioral scale has been considered to represent an equal-interval level of measurement indicating there is equal distancing

²The language of the scale uses the term "therapist" and "client," although its effectiveness is not restricted to counseling or psychotherapy.

between mutually exclusive categories (Evans, Stanley, & Burrows, 1993; Poole & Sanson-Fisher, 1979; Truax, 1963; Truax & Carkhuff, 1967).

The scale was designed to be used with audio taped-recorded interviews but also has been used with videotapes by both professionals and non-professional raters who have been trained to use it reliably, i.e., independent raters classify the same interaction at the same level on the scale. With regard to reliability of the Accurate Empathy Scale, Truax and Carkhuff (1967) cite a review of 24 studies which have utilized the scale. Findings demonstrate that a moderate to high degree of reliability has consistently been obtained without regard to the nature of the relationship being measured. For example, a moderate level of inter-rater reliability was found by Truax and Carkhuff (1963) (correlation coefficient of .57) and also by Truax (1966) (correlation coefficient of .59) when using the scale to measure therapists' level of accurate empathy during individual and group counseling sessions respectively. However, more than one-half of the studies reviewed demonstrated a high degree of inter-rater reliability with a range between .78 and .95. For example, Wargo (1962) reported an inter-rater reliability correlation coefficient of .89 in a study measuring the level of accurate empathy responses by the therapist during individual sessions whereas Truax, Wargo, and Silba (1966) reported a reliability between raters of .93 in their study of therapists' empathy level during group counseling sessions (for a complete review of the studies and their reliability findings, see Truax & Carkhuff, 1967).

More recent studies (Evans, Stanley, & Burrows, 1993; Poole & Sanson-Fisher, 1979; Robbins et al., 1979; Sanson-Fisher & Poole, 1978)

have employed the use of the Accurate Empathy Scale to measure the empathic responsiveness of the actual consultation behaviors displayed by *medical students* as a means of evaluating the effectiveness of empathy training. Independent observers were trained in the use of the empathy scale and these observers then applied the rating categories to videotapes or audiotapes recording students' interview behaviors and responses to patients. Poole and Sanson-Fisher (1979), using a percentage agreement formula recommended by Barr (1977), obtained a reliability of 93.3%. They concluded that raters were reliable in their categorization of the level of empathy being exhibited by the students. A recent study by Evans et al. (1993) assessing the change in empathy levels of medical students after a communication skills training program consisting of lectures followed by skills workshops reported a reliability correlation coefficient of .63 for observers using the Accurate Empathy Scale.

The Accurate Empathy Scale (Truax & Carkhuff, 1967) has been validated in extensive process and outcome research on counseling and psychotherapy (summarized in Truax & Carkhuff, 1967). Construct validity has been demonstrated in a number of studies which have shown that when a therapist scores highly on the scale, therapeutic change occurs in the client (Rogers, 1967; Truax, 1961, 1963; Truax, Carkhuff, & Kodman, 1965). Consequently, since the scale has been shown to have reliability and validity, and has been used previously in medical research, it appeared to be an appropriate instrument to use to assess medical students' ability to empathically communicate with terminally ill patients and to determine the extent to which training was effective in altering the levels of such a skill.

Evans et al. (1993) suggested, in their review of the construct validity of Truax and Carkhuff's measure, that this scale should not be used alone in research as it only taps the behavioral aspect of the empathy construct ignoring the cognitive and affective experience of the counselor. Based upon their suggestion, additional measures of empathy were included in this study.

Barrett-Lennard Relationship Inventory (BLRI)

The degree of empathy experienced within the medical student towards his/her patient (i.e., student's empathic understanding) was measured using the MO form of the Empathic Understanding Subscale of the Barrett-Lennard Relationship Inventory (Barrett-Lennard, 1962). The degree of empathy received by the patient within her relationship with the medical student was measured using the parallel OS form of the Empathic Understanding Subscale of the Barrett-Lennard Relationship Inventory (1962). Each item of the scale has a 6-point scale anchored with -3 = "no, I strongly feel that it is not true" to +3 = "yes, I strongly feel that it is true." Each scale has eight negative items and eight positive items. To score the inventory, the positive and negative items are summed separately to form subtotals; the negative sum score is multiplied by -1 and the two subtotals are then added to obtain the total score. Scores may range from -48 to +48.

According to Jarski et al. (1985), this scale is the best measure of empathy for use in medical research because the scale has known validity and relevant items. Item content was based on the Brown Relationship Q sort (Brown, 1954) and Rogers' conditions for therapeutic change (Rogers, 1957). The process by which the Relationship Inventory

items were developed seemed to ensure that most of them could be safely regarded as either positive or negative representations of the variable (empathy) that they were intended to represent. In order to eliminate any items for which this was untrue, however, a formal content validation procedure was done. A group of five qualified judges who were all client-centered counselors classified the items as being either positive or negative representations of the empathy construct. Items not meeting consistent agreement among the judges were eliminated from the scale.

To establish an estimate of reliability for the instrument, a sample of 42 clients and 21 counselors were employed from the University of Chicago Counseling Center. Barrett-Lennard (1962) reported that the split-half reliability of the two Empathic Understanding Subscales (forms MO and OS) was .86 and .96 respectively, and a test-retest correlation over a four-week period was .89 for the OS subscale. Validation of the Barrett-Lennard Relationship Inventories has been done with a variety of populations and more than 100 studies have used these inventories (Barrett-Lennard, 1972; 1980; 1983), including at least three with medical personnel (Higgins, 1990; Hornblow et al., 1988; Malpride, Leff, Wilson, & Moore, 1982).

Experimental Procedures

Experimental Treatment Intervention

Subjects received 10 weekly three-hour long instructional seminars consisting of one-hour lecture/discussions in death education and empathic communication theory followed by two-hour experiential processing sessions with the course instructor as described under the

discussion of the independent variable. Each student was assigned to a patient with metastatic cancer and videotaped 10 weekly relationship-building sessions for review during the processing component of the seminar. Subjects in the experimental group were asked not to reveal details about the nature of the instructional seminars to subjects in the comparison group. This was done to control for the internal validity threat of experimental treatment diffusion in which subjects in the comparison group learn about the nature of the educational intervention.

The Comparison Treatment Group

This group completed the self-report measures and videotaped session during the two observation/testing periods, but were given no educational intervention. During the study, they were also assigned to work with a cancer patient for the purpose of developing a facilitative relationship but received no formal training nor written or verbal feedback. Their experience with patients in the study was similar to that which presently occurs when students begin clinical rotations during their third year, having had only a 1 hour lecture and a 1 1/2 hour seminar on issues of death and dying and minimal preparation in facilitative communication skills with terminally ill patients.

Equipment and Facilities

The U.O.M.H.S. provided the training rooms (for lectures and processing seminars) as well as two rooms for medical student-patient sessions equipped with video cameras and playback units. The investigator and a graduate counseling assistant were present to organize the student-patient room assignments as well as to monitor use of the video equipment and assist students as needed.

Pretesting of Subjects

All subjects were telephoned by the investigator to arrange a suitable time for the pretest. Students were informed as to which group they had been placed and were given the opportunity to decline participation in the study if they so desired. Those who agreed to participate received a brief explanation as to what activities they would be involved in during the test situation. A typical test occasion involved one medical student arriving at a designated room in the medical library at the Azneer Academic Center and meeting with the investigator who obtained the student's written informed consent. Having done this, the investigator explained that the first part of the testing involved interacting with the cancer patient with whom they would work over the next 10 weeks. Subjects were told that they would have 40 minutes to explore the nature of the patients' concerns, recognizing the limitations of their training to date. The medical student then entered the testing room to interact with the patient and the session was videotaped.

After the session, the subject was asked to complete the BLRI and the Templer Death Anxiety Scale in the training room where the student and investigator originally met. The patient completed the client form of the BLRI in a separate room. When the subject completed all forms, he/she was given the patient's phone number and informed that he/she was responsible for coordinating with the patient meeting times and dates for ongoing sessions. The student further was informed that the investigator or a graduate counseling assistant would be available to help with student-patient room assignments within the medical library at the Azneer Academic Center.

Assignment to Group

Students were randomly assigned to groups by using a table of random numbers. Students who volunteered to participate in the study were listed and numbered from 1 to 27. An arbitrary starting point was selected on the table of random numbers and from this point, 27 numbers were selected. Then, for example, if the first random number was 13, the 13th student on the list was assigned to group 1 (experimental). If the next random number was 20, the 20th student was assigned to group 2 (control group) and so on. The table of random numbers was used until all 27 students had been assigned, by chance, to the experimental treatment group or the comparison treatment group. There were 14 students placed in the experimental group and 13 students placed in the comparison group.

Posttesting Procedures

Following the didactic and experiential components of the experimental treatment intervention, all subjects were tested using the same measures for the posttest. The investigator was again present during the posttesting to distribute and collect the self-report measures and collect the videotapes. Prior to leaving, each student was asked if he/she underwent any form of personal counseling while serving as a participant in the study. This was done in order to protect the internal validity of the study. As there were no students who reported having received counseling during the study, this potentially confounding variable was not present.

Human Subjects Protection

All institutional requirements of Drake University and the University of Osteopathic Medicine and Health Sciences were met to include the approval of the Human Subjects Research Review Committee from each respective university. Informed consent forms were signed by both medical students and cancer patients participating in the study. No one other than the investigator knew how each individual subject (medical student) and cancer patient responded on the research measures. Once subjects and patients agreed to participate, they were assigned identification numbers. These numbers were used to identify them throughout the study. No names appeared on any of the self-report measures and videotapes were labeled by identification numbers. These names and numbers along with the data were kept in a locked file. Data were reported in aggregate form with no means of identifying subjects.

There were no anticipated risks to medical students or to cancer patients who participated in the study. However, if the student or patient had experienced anxiety, depression, or other forms of psychological distress that could not have been addressed within the context of the study, arrangements would have been made by the investigator or course instructor to seek additional help. The Department of Psychiatry, under the direction of Dr. David Drake, M.D., was aware of the nature of the study and had agreed to offer supportive counseling intervention when warranted to the medical students. Cancer patients were to be referred to their private physicians for psychological intervention if the need had arisen.

Data Analysis Procedures

To assess the equivalence of groups at pretest, t-tests were performed on all of the research measures. Means, standard deviations, and p-values were calculated.

To test for significant differences between groups at posttest, a two-way analysis of variance for repeated measures was used for each dependent measure (DAS scores, scores on the clinician form [MO] of the BLRI, scores on the client form [OS] of the BLRI, and scores on the Truax and Carkhuff Accurate Empathy Rating Scale). In this form of analysis of variance, the experimental and comparison treatment conditions were considered one factor (groups); the occasions on which the measure of the dependent variable is administered (pretest and posttest) was considered the other factor. Figure 2 illustrates the two-factor repeated measures design chosen for this analysis. The treatment condition was the between-subjects Factor A. The testing occasion was the within-subjects repeated measures Factor B.

Factor A Group	Factor B - Testing Occasion	
	Pretest	Posttest
Experimental	1	2
Comparison	3	4

Figure 2. Two-way repeated measures design.

The main effects (F ratios for the two factors) were not of interest in the analysis of variance for this study. For example, it would not have been meaningful to compare the mean of all of the pretest scores with the mean of all of the posttest scores, ignoring whether the scores were from experimental treatment or comparison treatment subjects. What was of interest in this study was the *interaction* between time of measurement and treatment, i.e., it was of interest to determine whether the difference between the pretest and posttest means of the experimental treatment group was significantly greater or less than the difference for the comparison treatment group (Borg & Gall, 1989).

The statistical hypothesis expressed in null form used to test each of the research hypotheses in this study at the .05 level of significance (two-tailed test) was as follows:

$$H_0 : (u_2 - u_1) - (u_4 - u_3) = 0$$

The contrast of primary interest to test in each separate research hypothesis was the *treatment condition* (group) by *time* (pre-post) interaction term. That is, if the educational training was to be sufficiently potent, an interaction would result.

The preferred method of analysis for a pretest-posttest control group design, according to Borg and Gall (1989), is analysis of covariance in which the posttest means are compared using the pretest scores as a covariate. However, due to the small sample size in this study and the fact that the ANCOVA analysis reduces the degrees of freedom for error when determining the correlation coefficient, it was felt that statistical power would be reduced substantially and the chance of finding statistical significance lowered accordingly. Hence,

to increase statistical power, the technique of repeated measures ANOVA was selected as this analysis does not subtract from the degrees of freedom for error as much as the ANCOVA procedure. The repeated measures ANOVA is considered to be nearly as powerful as ANCOVA when small sample sizes are involved (R. Hoehle, personal communication, April 5, 1996).

The investigator was aware that computing the repeated measures ANOVA four separate times might lead to an increase in a Type I error rate. This then became a limitation in the present study. The use of MANOVA to simultaneously test all of the variables was also considered over a series of ANOVAS. This would have eliminated the threat of increasing the Type I error rate. However, the use of this procedure was ruled out based on the same rationale for not using the ANCOVA procedure. The sample size in the present study was considered too small, and hence, the power of the MANOVA would have been lowered because of reduced degrees of freedom for error (Tabachnick & Fidell, 1985). As suggested by Tabachnick and Fidell, the ANOVA method may be more powerful than MANOVA for analyzing repeated measures designs with small numbers.

Assumptions met for the data analysis procedure (repeated measures ANOVA) included: (a) observations within each treatment must be independent, (b) the population distribution within each treatment must be normal, (c) the variances of the population distribution for each treatment should be equivalent, and (d) homogeneity of covariance must be present. This refers to the requirement that the relative standing of each subject is maintained in each treatment condition (i.e., pretest and posttest) (Gravetter & Wallnau, 1985). Homogeneity of covariance was

examined by testing the hypothesis that the population variance-covariance matrices were equal across cell levels of the between-subjects factor (group). This was evaluated by using the multivariate generalization of Box's M Test. The assumption was met at the .05 level of significance for all dependent measures. In addition, the pooled variance-covariance matrix combining the experimental and comparison groups demonstrated a sphericity pattern which is necessary to obtain valid treatment (B) and interaction (A x B) F tests using pooled $MS_{D \times swg}$ as the error term. The assumption of sphericity requires that variances of differences for all treatment combinations be homogeneous. However, as this study employed only pretest and posttest "treatment levels," sphericity is inherent within the design (S. Stegall, personal communication, 1 July, 1966).

Another consideration which was taken into account prior to the data analysis procedure was the fact that this study contained unequal sample sizes for the two treatment condition groups. The final experimental treatment condition group had 12 subjects while the comparison treatment condition group had 11 subjects. Therefore, the number of observations in the factorial two-way data table had unequal cell sizes. Figure 3 illustrates these cell frequencies. However, the two-way ANOVA calculations may be carried out in the case of unequal sample sizes if there are proportional cell frequencies satisfying $n_{ij} = n_{.i} n_{.j} / n_{..}$ (Kleinbaum & Kupper, 1978). As illustrated in Figure 3, this means that when any one cell size is chosen (12 for the experimental pretest, for example), this number must equal the product of its column sum (23) times its row sum (24) divided by the grand sum (46). So, $12 = 24 \times 23 / 46$.

Factor A	Factor B		Sum
	Pretest	Posttest	
Experimental	n = 12	n = 12	$n_{1.} = 24$
Comparison	n = 11	n = 11	$n_{2.} = 22$
Sum	$n_{.1} = 23$	$n_{.2} = 23$	$n_{..} = 46$

Figure 3. Proportional cell frequency method

If the cell size for the comparison group of 11 on the pretest is chosen, then $11 = 22$ (row sum) \times 23 (column sum) / 46 (grand sum). When the proportional cell frequency allocation of $n_{ij} = n_{.i} n_{.j} / n_{..}$ produces the n for each cell, the standard equal cells-number ANOVA calculations can be performed, without the need to resort to regression analysis or alternate methods (e.g., the method of unweighted means) (Kleinbaum & Kupper, 1978). The data analysis for this study was accomplished using the 1993 Statistical Package for the Social Sciences (SPSS) for Windows - Release 6.1.2.SPSS.

Chapter 4

ANALYSIS OF THE DATA

The purpose of this study was to examine the effects of a combined didactic-experiential death education/empathy training course (which included weekly relationship-building sessions with a terminally ill cancer patient) on the level of death anxiety and empathic ability of medical students. It was of primary interest to determine if this *formal instructional seminar teaching model* was effective in reducing death anxiety and in enhancing empathic ability in students above mere "experience" interacting with terminally ill cancer patients. The findings are presented in this chapter. Statistical procedures and computations are discussed with the aid of tabular displays. A separate two-way repeated measures full-factor analysis of variance model was used to analyze the data for training effects on each dependent measure. In each analysis, the group factor was treated as a fixed effect variable. The four dependent measures consisted of the scores for each subject on the DAS, the medical students' rating of empathic understanding on the BLRI Empathic Understanding Subscale-MO Form, the observers' videotape ratings of medical students' communicated empathy using the Truax and Carkhuff Accurate Empathy Scale, and the patients' rating of perceived empathy on the BLRI Empathic Understanding Subscale-OS Form.

Subject Characteristics

The characteristics of the medical students were described in Chapter 3. Of importance here is the fact that the data from four medical students had to be dropped from analysis due to the death of the patient or deterioration in their medical condition. The patient of one student that was assigned to the experimental group experienced a rapid physical decline within the first four weeks of the study and was admitted to the Kavanaugh House. The Kavanaugh House is sponsored by Hospice of Central Iowa and offers palliative medical care for cancer patients during their final months of life. Although her student continued to make weekly visits, the sessions were often marked by incoherent speech due to her intravenous pain medication. Thus, it was decided by the investigator not to include the student's and patient's data in the analyses. Another student in the experimental group was assigned to a patient who passed away a few weeks after the pretest period. Within the comparison group, one student's patient also experienced a rapid physical decline after approximately four sessions and was unable to complete the posttest measures. Another student in the same group met with his patient over a period of six weeks after which her condition rapidly deteriorated resulting in her death. Therefore, out of the 27 students who began the study, the data from 23 students were used in the final statistical analyses. The experimental group provided data from 12 students while the comparison group provided data from 11 students.

An independent samples t-test run at the .05 level of significance revealed no significant differences between groups on the variable of

mean student age, $t(21) = -.98$, $p = .350$. Likewise, there was no significant difference between groups on the variable of student gender, $t(21) = -.64$, $p = .531$. Therefore, the randomization process was deemed successful in distributing students in regards to age and gender across the experimental and comparison groups in an unbiased manner.

Cancer Patient Characteristics

The patient characteristics were also described in Chapter 3. As mentioned, four patients were unable to complete the study due to physical deterioration and/or death. Each of these four women had been diagnosed with metastatic breast cancer. Two patients' data were dropped from the experimental treatment group and also two patients' data from the comparison treatment group were dropped. Therefore, the data from 12 patients assigned to experimental group students and the data from 11 patients assigned to comparison group students were used in the final data analyses to measure student empathy.

An independent samples t-test run at the .05 level of significance revealed no significant difference between groups in regards to mean patient age. The randomization process appeared successful in distributing patients across experimental and comparison groups in regards to age in an unbiased fashion.

Analysis of Instructional Seminar Effects

In this section, the means and standard deviations for all dependent measures over the two testing occasions (pretest vs. posttest) are presented in Table 1. Following this, the results of the t-test for

independent samples calculated to assess group equivalence at the pretest testing occasion are given for each dependent measure in conjunction with the results of tests of the hypotheses.

Table 1. Means and Standard Deviations for Dependent Measures (n = 23)

1(a) Templer Death Anxiety Scale

		Pretest	Posttest	N
Experimental group	<u>M</u>	5.92	4.33	12
	<u>SD</u>	2.23	1.83	
Comparison group	<u>M</u>	6.27	5.18	11
	<u>SD</u>	2.97	2.23	

1(b) BLRI (Medical Student Rating of Empathy Scale)

		Pretest	Posttest	N
Experimental Group	<u>M</u>	13.17	25.50	12
	<u>SD</u>	11.75	7.49	
Comparison Group	<u>M</u>	13.91	20.00	11
	<u>SD</u>	11.86	8.17	

1(c) Truax and Carkhuff Accurate Empathy Scale

		Pretest	Posttest	N
Experimental Group	<u>M</u>	1.93	2.68	12
	<u>SD</u>	0.31	0.60	
Comparison Group	<u>M</u>	1.97	1.67	11
	<u>SD</u>	0.30	0.36	

1(d) BLRI (Patient Rating of Empathy Scale)

		Pretest	Posttest	N
Experimental Group	<u>M</u>	21.33	33.67	12
	<u>SD</u>	9.01	7.76	
Comparison Group	<u>M</u>	26.72	35.36	11
	<u>SD</u>	10.96	9.37	

Results of Hypotheses Testing

The results of the testing of each hypothesis at the .05 level of statistical significance are presented below. Included is an analysis of group equivalence at pretest testing occasion using the independent samples t-test. This was done to ensure that the randomization process was successful.

Hypothesis 1

There is no difference in the level of death anxiety as measured by Templer's Death Anxiety Scale between medical students who receive a combined didactic and experiential death education/empathy training course in conjunction with weekly relationship-building sessions with a terminally ill cancer patient and medical students who are in a comparison group who receive the weekly relationship-building sessions with a terminally ill cancer patient but receive no educational intervention.

The mean pretest scores (M) and standard deviations (SD) on the Templer DAS are shown in Table 1(a). The experimental treatment group obtained a mean of 5.92 and a SD of 2.23. For the comparison treatment group, there was a mean of 6.27 and a SD of 2.97. The results of the t-test for equivalence of groups at pretest on the DAS demonstrated no significant differences between the mean scores of the experimental and comparison groups, $t(21) = -.33$; $p = .747$ (two-tailed test).

The results of the 2×2 repeated measures analysis of variance for death anxiety scores is illustrated in Table 2. The comparison of primary interest, the treatment condition (Group)-by-testing occasion (Pre-Post) interaction was not statistically significant, $F(1,21) = .240$, $p = .629$. That is, the group that received the instructional seminar in conjunction with weekly relationship-building sessions with a terminally ill cancer patient did not decrease their scores significantly more than the comparison group who received the weekly relationship-building sessions without any formal educational intervention. Null Hypothesis 1 was not rejected.

Table 2. Summary of Two-Way Repeated Measures Analysis of Variance for Templer Death Anxiety Scale (N = 23)

Source of Variance	SS	df	MS	F	Sig of F
Between Subjects:					
Groups (A)	4.16	1	4.16	0.52	.479
subjects w. groups	168.49	21	8.02		
Within Subjects:					
Pre-Post Repeated Measure (B)	20.52	1	20.52	7.08	.015
Group x Pre-Post (AB)	0.70	1	0.70	0.24	.629
B x subjects w. groups	60.91	21	2.90		

Hypothesis 2

There is no difference in the levels of empathic understanding experienced by medical students as measured by the clinician form (M0) of the BLRI Empathic Understanding Subscale between medical students who receive a combined didactic and experiential death education/empathy training course in conjunction with weekly relationship-building sessions with a terminally ill cancer patient and medical students who are in a comparison group who receive the weekly relationship building sessions with a terminally ill cancer patient but receive no educational intervention.

The mean pretest scores (M) and standard deviations (SD) on the BLRI Empathic Understanding Subscale (Medical Student Rating) are shown in Table 1(b). The experimental treatment group obtained a mean of 13.14

and a SD of 11.75. For the comparison treatment group, there was a mean of 13.91 and a SD of 11.86. The results of the independent samples t-test for equivalence of groups at pretest on the BLRI Empathic Understanding Subscale-M0 Form demonstrated no significant differences between the mean scores of the experimental and comparison groups, $t(21) = 1.15$, $p = .882$ (two-tailed test).

The results of the 2 x 2 repeated measures analysis of variance for the medical students' rating of empathic understanding scores are illustrated in Table 3. The contrast of primary interest, the interaction between treatment condition (Group)-by-testing occasion (Pre-Post) was not statistically significant, $F(1,21) = 1.57$, $p = .224$. That is, the group that received the instructional seminar in conjunction with weekly relationship-building sessions with a terminally ill cancer patient did not increase their scores on empathic understanding more than the comparison group. It does not appear that the formal instructional seminar is associated with a significant increase in students' perceptions of their empathic ability above mere experience in interacting with a terminally ill cancer patient. Null Hypothesis 2 was not rejected.

Table 3. Summary of Two-Way Repeated Measures Analysis of Variance for BLRI Empathy Subscale (Medical Student Rating-MO Form) (N = 23)

Source of Variance	SS	df	MS	F	Sig of F
Between Subjects:					
Groups (A)	64.95	1	64.95	0.50	.486
subjects w. groups	2,715.79	21	129.32		
Within Subjects:					
Pre-Post Repeated Measure (B)	974.08	1	974.08	13.68	.000
Group x Pre-Post (AB)	111.82	1	111.82	1.52	.224
B x subjects w. groups	1,495.79	21	71.23		

Hypothesis 3

There is no difference in the level of communicated empathy as measured by the Truax and Carkhuff Accurate Empathy 9-point Scale between medical students who receive a combined didactic and experiential death education/empathy training course in conjunction with weekly relationship-building sessions with a terminally ill cancer patient and medical students who are in a comparison group who receive the weekly relationship-building sessions with a terminally ill cancer patient but receive no educational intervention.

The mean pretest scores (M) and standard deviations (SD) on the Truax and Carkhuff Accurate Empathy Scale are shown in Table 1(c). The experimental treatment group obtained a mean of 1.93 and a SD of 0.31

while the comparison treatment group obtained a mean of 1.97 and a SD of 0.30. The results of the t-test for independent samples to assess group equivalence at pretest demonstrated no significant differences between the experimental and comparison group mean scores, $t(21) = -.32$, $p = .755$ (two-tailed test).

The results of the 2 x 2 repeated measures analysis of variance for communicated empathy as rated by the two trained observers are illustrated in Table 4. The contrast of primary interest, the interaction between treatment condition (Group) and test occasion (Pre-Post) was statistically significant, $F(1,21) = 40.19$, $p = .000$. That is, the experimental group that received the instructional seminar in conjunction with weekly relationship-building sessions with a terminally ill cancer patient increased their scores significantly more than the comparison group that received the weekly relationship-building sessions but no formal educational intervention. Null hypothesis 3 was rejected.

Table 4. Summary of Two-Way Repeated Measures Analysis of Variance for the Truax and Carkhuff Accurate Empathy Scale

Source of Variance	SS	df	MS	F	Sig of F
Between Subjects:					
Groups (A)	2.73	1	2.73	10.36	.004
subjects w. groups	5.53	21	0.26		
Within Subjects:					
Pre-Post Repeated Measure (B)	0.58	1	0.58	7.30	.013
Group x Pre-Post (AB)	3.20	1	3.20	40.19	.000
B x subjects w. groups	1.67	21	0.08		

Hypothesis 4

There is no difference in levels of patients' received empathy as measured by the client form (OS) of the BLRI Empathic Understanding Subscale between medical students who receive a combined didactic and experiential death education/empathy training course in conjunction with weekly relationship-building sessions with a terminally ill cancer patient and medical students who are in a comparison group who receive the weekly relationship-building sessions with a terminally ill cancer patient but receive no educational intervention.

The mean pretest scores (M) and standard deviations (SD) on the BLRI Empathic Understanding Subscale (Patient Rating) are shown in Table 1(d). The experimental treatment group obtained a mean of 21.33 and a SD of 9.01. The comparison treatment group revealed a mean of 26.72 and a SD of 10.96. The results of the independent samples t-test to assess group equivalence at pretest demonstrated no significant differences between the experimental and comparison group mean scores.

The results of the 2 x 2 repeated measures analysis of variance for the patients' rating of the students' empathic ability (perceived empathy by the patient) are illustrated in Table 5. The contrast of primary interest, the interaction between treatment condition (Group)-by-testing occasion (Pre-Post) was not statistically significant, $F(1,21) = .89$, $p = .357$. That is, the students who received the instructional seminar in conjunction with weekly relationship-building sessions with a terminally ill cancer patient were not considered by patients to be more empathic than students in the comparison group. Null hypothesis 4 was not rejected.

Table 5. Summary of Two-Way Repeated Analysis of Variance for the BLRI Empathy Subscale (Patient Rating-OS Form)

Source of Variance	SS	df	MS	F	Sig of F
Between Subjects:					
Groups (A)	144.28	1	144.28	1.12	.302
subjects w. groups	2,708.45	21	128.97		
Within Subjects:					
Pre-Post Repeated Measure (B)	1,261.83	1	1,261.83	28.57	.001
Group x Pre-Post (AB)	39.22	1	39.22	0.89	.357
B x subjects w. groups	927.61	21	44.17		

Chapter 5

DISCUSSION, IMPLICATIONS, RECOMMENDATIONS, AND CONCLUSION

Discussion of Results of Dependent Measures

The purpose of this study was to develop a combined didactic and experiential death education/empathy training course (in conjunction with weekly relationship-building sessions with terminally ill cancer patients) and to examine its effectiveness on the death anxiety level and empathic ability of medical students. It was of primary interest to determine if this *formal instructional seminar teaching model* was effective in reducing death anxiety and in enhancing empathic ability in students more than mere experience in interacting with a terminally ill cancer patient without such formal educational intervention. There was no statistically significant ($p > .05$) decrease in death anxiety level as a result of the instructional seminar (in conjunction with weekly relationship-building sessions) when contrasted with the comparison group who received weekly relationship-building sessions with a terminally ill patient without the formal educational intervention. In regards to the students' perception of empathic understanding, results indicated no significant difference ($p > .05$) between the experimental group that received the formal instructional seminar and the comparison group that did not. Also, *patients* in the experimental group and patients in the comparison group demonstrated no significant differences in their perceptions of empathy received from students ($p > .05$).

However, after participating in the instructional seminar (in conjunction with weekly relationship-building sessions), trained observers rated the experimental group as demonstrating significantly more empathic communication behaviors ($p > .05$) than the comparison group.

Templer's Death Anxiety Scale

The lack of significant differences on the levels of death anxiety between the experimental treatment condition group and the comparison treatment group following training concurs with the results of previous studies with nurses which also found no significant changes in death anxiety after a death education intervention (Bailis & Kennedy, 1977; Hopping, 1977; McClam, 1980; Peace & Vincent, 1988; Rigdon & Epting, 1985). Durlak and Riesenber (1991) reported that experiential programs tended to be associated with decreased death anxiety and fear. However, this study incorporated a combination of the didactic and experiential styles of death education. The combined approach led to decreases in the level of self-reported death anxiety for the experimental group but not significantly more so than the comparison group who also demonstrated a small decrease in self-reported death anxiety. The treatment condition offered the comparison group was experiential only in the sense that these students interacted with a terminally ill cancer patient over the 10-week period without any educational intervention. Contrary to the theoretical assumption that exposure to a terminally ill cancer patient without death education would increase death anxiety, it is possible that the repetitive relationship-building sessions actually helped to demystify death and desensitize these students to their anxiety

concerning the process of dying (Mermann et al., 1991). The patients helped to teach the experience of illness, the devastation of suffering, and the qualities needed by the caring physician. Most patients were willing to discuss intimate concerns with the students. Lacking clinical skills, the students were free to listen without prejudice or judgement to patients facing death and may have, over time, become comfortable conversing with these dying patients. Also, as these students were not primarily responsible for the direct care of their patients, the students' conscious awareness of death anxiety was not as pronounced. This experiential component was also part of the experimental treatment condition. It might be that this *experiential* aspect contributed to the lowering of death anxiety in both groups which is in line with the findings of Durlak and Riesenbergr (1991). This conclusion is only tentative because a no-treatment group was not included. The inclusion of such a group was precluded because of logistical problems.

The lowering of death anxiety within both groups was small and nonsignificant between groups. Perhaps the length of time spent with the dying patient was insufficient for lowering students' death anxiety more substantially. It might be of interest to examine whether or not lengthening the course to a full semester would be of any added benefit. It might also be of interest to determine the differential effects of the didactic and experiential components of the experimental instructional seminar on levels of death anxiety.

Another suggestion which might be of interest would be to study the effects of death education upon subjects who have high death anxiety prior to the period of training as compared with the effects upon those with low death anxiety prior to treatment. In this study, the average

death anxiety scores in both the experimental and comparison groups were within the normal range of 4.5 to 7.0.

The lack of significant differences in death anxiety levels between the experimental and comparison treatment groups might also be attributed to the nature of the death anxiety instrument and its use with the medical student population, in particular. The Templer Death Anxiety Scale is a direct, *self-report* measure of conscious death fear and anxiety (Templer, 1970). Many death education programs have adopted the primary goal of the reduction of conscious death anxiety in the hope that individuals would thereby be better able to cope with their own death and that of others more effectively. Moreover, they should be more able to come to terms with their own personal attitudes, feelings, emotions, and values concerning death and death-related issues (Neimeyer, 1988; Durlak & Riesenber, 1991; Durlak, 1978-79). This latter goal may be inappropriate, however, since it does not take into account the complex *unconscious* personal meanings that death may have for different individuals (Hayslip & Galt, 1993-94). The Templer DAS does not tap into the unconscious level of death anxiety. Unfortunately, at present, there exist no measures of unconscious death anxiety with established reliability and validity. Hence, assessing death anxiety at the conscious level is the most valid method at this time.

The assessment of death anxiety in medical students at a conscious level may have led to inconclusive results. Medical schools propagate the tendency to encourage the avoidance of death anxiety through death denial (Holman, 1990). Medical students learn from residents and practicing physicians that they must prevent any potential life-threatening situations in caring for their patients. They perceive

themselves to be ultimately responsible for preventing death and this kind of responsibility can at times become overwhelming, leaving medical students highly stressed and anxious. Guber (1983) discusses the resulting impact upon physicians in training:

This fear (of failure) is seen as a natural consequence of any undertaking . . . where risk is infinite, and where patient care responsibility is great. One can understand a student fearing treatment failure, his own impotency as a treating person, and his patient's death, saying, "I did all I could." (p. 61)

It appears that the medical profession places medical students and practicing physicians in the position of firmly opposing illness and death, resulting in their refusal to deal openly with the issue. Wiesman (1974) proposed that defining oneself as a healer allows physicians to circumvent the possibility of his or her own death. It seems plausible that regularly experiencing this impending threat on a conscious level would reduce the physician's level of functioning. Hence, the physicians, who are also the role-models and mentors of the second year medical students, may repress their awareness of their own mortality and that of others. Emulating their professors, the second year students may hold the underlying desire to appear "as if" not fearful of death and therefore, at the onset of the study, may have shown lower scores on the DAS. They might have rated themselves as they would like to view themselves as compared to how they might honestly be feeling due to medical school expectancies and the role-modeling from their professors.

It was this investigator's intent to offer training related to death and dying along with appropriate communication skills in order that students might openly acknowledge and recognize their own death fears and anxiety. Although students in the experimental group openly

discussed their fears and concerns in regards to their own anxieties around issues of death and the dying of their patients, and further expressed how meaningful such understanding was for them, this was not reflected by the scores on the Templer Death Anxiety Scale. It is plausible that this scale may not be the most appropriate instrument to use with medical students.

The results of the findings on the Templer Death Anxiety Scale did not appear to support the conceptual model as illustrated in Figure 1 (Chapter 1). However, if the death anxiety scale is not accurately measuring conscious death anxiety in the medical students due to medical school expectancies, unconscious levels of death anxiety may be present contributing to the need for some of the students to maintain denial of their feelings of fear and apprehension to protect against feelings of anxiety and maintain a self-concept of "physician as healer." Whether or not this is true is only speculative at this point. However, it might be helpful to examine the students' own perceptions of self-awareness and empathic understanding of their patients as measured by the medical student ratings on the BLRI Empathic Understanding Subscale.

BLRI (Medical Student Rating of Empathy Subscale)

The lack of significant results between the experimental treatment group and the comparison treatment group is contrary to the findings of Higgins (1990) who found a significant increase in students' rating of empathic understanding with simulated patients following a short empathy training course. However, Higgins compared the training group to a "waiting-list" control group which received no treatment during the period that the experimental group was in training. The present study

did not employ a no-treatment group but used a comparison treatment situation which was designed to closely simulate that which occurs presently when students interact with dying patients during their clinical rotations.

An independent samples t-test run on the BLRI-MO Form *posttest* scores was found to show significant differences between the two groups at the .10 level of significance. Therefore, results tended to be in the expected direction of the experimental treatment group having greater empathic understanding following training. However, when the two-way repeated measures analysis was run, there were no significant differences between groups at the .05 level of significance. This result might have been due to the small sample size employed in this study which contributed to decreased statistical power. The results from the two-way repeated measures ANOVA suggest that both the trained students in the experimental treatment group and the "untrained" comparison group students perceived themselves as having increased their empathic understanding towards their patients over the 10-week study period. Such results may be considered inconclusive due to the small sample size as mentioned, and another plausible explanation for the comparison group's results is a misunderstanding of the empathy construct itself. Without instruction as to the meaning of empathy, the students in the comparison group may have had a naive understanding of what empathic understanding entails. They might have confused empathic understanding which entails apprehending and responding concretely to the feelings and meanings associated with their patients' experiences without actually experiencing that person's feelings with the construct of sympathy. Sympathy involves compassion, pity, and other feelings related to *one's*

own emotional needs, especially when aware of another's suffering. Students might have assumed that their own experiences and needs are common to others' which decreases their curiosity about their patients' points of reference. Sympathy, therefore, makes one more aware of oneself, whereas empathy makes one more aware of *others* by providing information from their perspective (Katz, 1963). When rating themselves on the MO-Form of the BLRI Empathy Subscale, the comparison students might have misinterpreted their understanding of their patient to be true empathy, when it is more likely that what they were doing is confusing empathy with sympathy.

As mentioned by other investigators (Elliott et al., 1982; Evans et al., 1992; Hammond & Kern, 1979; Robbins et al., 1979), the use of cognitive and attitudinal measures of empathy have limited usefulness in detecting changes in medical students' communication skills following training. Their expressed attitudes often do not correlate with interview behaviors. Therefore, an emphasis has begun to be placed on behavioral techniques to determine the effectiveness of empathy training programs (Evans et al., 1992). Following in this vein, the present study incorporated, as part of the empathy cycle described by Barrett-Lennard (1981), a behavioral assessment utilizing two trained observers to rate the level at which students' perception of empathic understanding can be effectively communicated to their patients. The next section addresses the findings of this behavioral assessment.

Truax and Carkhuff Accurate Empathy Scale

The results of the trained observer's ratings of communicated empathy as measured by scores on the Truax and Carkhuff Accurate Empathy

Scale demonstrated that the experimental group displayed significantly higher ratings after training than the comparison group. This finding concurs with those of other investigators who reported increased communicated empathy after communication skills training using the Carkhuff (1969) or the Truax and Carkhuff (1967) behavioral measures (Evans et al., 1993; Higgins, 1990; Poole & Sanson-Fisher, 1979; Weihs & Chapados, 1986). Similar to findings revealed by Evans et al. (1993), a paper and pencil test of empathic understanding is insensitive to the behavioral dimension of empathic responsiveness. Although both the experimental and comparison groups showed no significant differences on the self-report MO-BLRI Empathic Understanding Subscale, the instructional seminar which focused on empathic communication skills with the terminally ill cancer patient increased the trained students' ability to effectively display empathy behaviors as noted by the trained observers. The comparison group subjects actually demonstrated a slight (although nonsignificant) decrease in communicated empathy ratings by the observers. Such a finding lends support to previous research studies which reveal that over the course of medical education, students not given communication skills training lose interest in and ability to elicit patients' anxieties and concerns regarding their illness experience, focusing instead on patients' pathophysiological complaints (Evans, 1990; Maquire, 1984; Preven et al., 1986). It is plausible here that the comparison group students who interacted with terminally ill patients without any educational intervention over the 10-week period, began to lose interest also and were uncertain as to what to focus upon in their sessions. A number of these students verbalized that they were not sure what they were doing and were feeling a lack of direction. A

common feeling expressed was, "All I do is listen. I'm not sure what to say." However, all of the students in the comparison group verbalized a sincere liking for their patients and a belief that a good relationship was forming despite the students' uncertainty as to what to say or do at all times.

The students in the instructional seminar experimental group spent time in class developing self-awareness as to how they might be blocking empathic understanding of their patient, especially around issues concerning the patients' experiences of crisis and loss. Their increase in empathic understanding was reflected on the MO-Form of the BLRI Empathy Subscale whereas the comparison group scores might have been reflecting sympathetic understanding as opposed to empathic understanding. The trained observers, however, saw significant behavioral differences in communicated empathy within the trained group. This finding lends tentative support to the conceptual model suggesting that students given training in empathic communication skills will increase their level of self-awareness, increase their empathic understanding of their patients' illness experiences, and behaviorally communicate this understanding effectively to their patients. The support for the model is tentative at this point in time as the study did not ascertain if the comparison group was indeed demonstrating sympathetic understanding versus empathic understanding towards their patients.

BLRI (Patient Ratings of Empathy Scale)

Results indicated that there was no significant difference between the two treatment groups as to patients' perceptions of empathy received

from the medical students. This finding is contrary to Higgins' (1990) finding using simulated patients who rated the students' empathy. A plausible explanation for this discrepant finding is that the patients in the present study were real patients and may not have had an awareness of what being empathically understood entailed. Many of the patients verbalized openly how much they liked and enjoyed their students. This occurred across both experimental and comparison treatment group patients. Hence, as noted by Higgins, perhaps some of the patients in the comparison group (or both), gave ratings to the students partly based on a "nice guy" quality, or rated students on their perception of how sensitive the student appeared or how energetic the student was in attempting to understand them. Barrett-Lennard (1981) noted that a person answering the BLRI is not aware of the concept of empathic understanding since it does not require them to rate the students' level of empathy directly. The scale is an indicator of "relational responses, which are then put together and interpreted as providing an index of empathic understanding" (Barrett-Lennard, 1981, p. 95).

It appears from the results of this study and the many positive feelings which were expressed to the investigator that patients in the comparison group developed a relationship based on closeness with their students. The patients felt "listened to" and whether or not they were understood "empathically" by their students did not seem to matter at their ninth session. The patients might have interpreted understanding as time spent with them by an attentive student who listened well. Hence, ratings on the BLRI-OS Form Patient Rating Scale were high for the comparison group. However, *empathic understanding* occurs at

different levels as noted by the trained observers who rated the videotapes and saw different levels of empathy between the comparison and experimental group being displayed. This raises the question of whether or not empathic communication skills training within a death education context is important for students if patients don't seem to see it as necessary. As Barrett-Lennard (1962) noted, it is the patients' perception of the therapists' empathy that is important and most closely related to positive client outcomes. However, in defense of the instructional seminar training, had the comparison group patients experienced the form of relationship offered by a trained student, they might have responded differently. In the absence of any other form of relationship except that offered by the comparison group students, the patients may believe that what they experienced was deep understanding.

The use of the empathy cycle in the present study as described by Barrett-Lennard (1981) resulted in inconclusive findings. An analysis of empathy based on a combination of all three measures (the BLRI Student Rating of Empathy Subscale, the Truax and Carkhuff Accurate Empathy Scale, and the BLRI Patient Rating of Empathy Subscale) would indicate that students and patients from both groups perceived that their relationships were characterized by empathic understanding, but that the level of that understanding was significantly greater following the instructional component. A replication of this study with a larger sample size might help clarify the usefulness of this cycle in understanding empathy training with medical students who interact with real patients.

Implications for Medical Education

The acquisition of didactic knowledge and experiential awareness within the realm of empathic communication with the terminally ill cancer patient was the focus of the instructional seminar. Based upon behavioral observations of the students by the investigator during the weekly seminar training and videotape processing, the attainment of such knowledgement and student awareness was suggested as having occurred. Regardless of how the patients rated the comparison group students on empathy, the behaviors of the students in the experimental group led the investigator to conclude that the students in the latter group developed a deeper comprehension and knowledge base of what terminally ill cancer patients experience. These students have been formally taught and appeared to have developed a better insight into the process of having an incurable disease, the pain involved, the defensive coping strategies that patients employ, and the nature of crisis and loss in the patients' lives. Of primary importance, the students appeared to have developed an increase in self-awareness and less personal defensiveness which enhanced their ability to empathically respond to their patients.

The above conclusions were based upon behavioral observations such as the following: (a) the increased use of facilitative behaviors by the student to include attentive listening, the use of clarification, accurate restatement of feelings, and empathic reflection of feelings as viewed on the students' videotapes; (b) the responses made by the patients to such facilitative student behaviors to include a more active willingness to explore feelings surrounding their illness experiences; and (c) questions asked by students during the seminars suggesting a

growing awareness of the empathic process. For example, questions and comments such as, "When I use restatement of my patient's feelings, how does this help her to explore her feelings on a deeper level?" and, "How might I respond to my patient when she begins to cry? I have always found it difficult to express my own sadness openly, so I'm not sure how to help her," suggested that students were actively attempting to integrate the underlying theories of grief, crisis, and empathic communication into their behavioral interactions with their patients. Over the 10 weeks of the instructional seminar period, these students demonstrated on videotape that they were implementing what they had been learning as reflected by their improvement in and increased use of empathic responses. Such empathic communication has been documented in previous studies as resulting in increased patient satisfaction (Evans et al., 1992), compliance (DeMatteo & DiNicola, 1982), increased accuracy in diagnosis (Evans et al., 1991), and in improved health outcomes (Kaplan et al., 1989). Hence, behaviors demonstrating empathic communication were an important outcome criterion in this study. The empirical findings suggested that the instructional seminar training did result in students demonstrating significantly more empathic communication responses as compared with those students who did not receive the training.

The fact that the patients in this study did not perceive the experimental group students as more empathic than the comparison group students does not negate the importance of the instructional seminar teaching model. What the patients' ratings may indicate is that *interaction* with medical students in their pre-clinical years is a valuable experience for both patients and students regardless of whether

or not they have had training in death education and empathy skills. The present study suggests that the instructional seminar along with weekly relationship-building sessions does increase students' ability to communicate empathic understanding to patients. However, due to the inconclusive results contributed by the patients' ratings of empathy, further research is needed to ascertain if such formal training is valuable to include in the medical school curriculum. A longitudinal study which examines whether having a trained empathic physician helps to prolong life and improve the quality of life might prove helpful in adding credibility to such an educational endeavor. Based upon the present findings, medical educators should take note of the positive response of introducing pre-clinical students to terminally ill cancer patients for the purpose of building a facilitative relationship.

It must be acknowledged that this study employed a small number of subjects and the length of intervention time was limited. Increasing the study's sample size and length of intervention might have led to a more powerful test of the experimental treatment. This remains an area for future research.

Recommendations for Further Research

Suggestions for further research include:

1. It would be of interest to continue the present study and follow these students during their clinical rotations to measure differences between groups in patient satisfaction with care, patient compliance with treatment, and the students' diagnostic accuracy.
2. It would be of interest to replicate this study with a larger sample size and a longer intervention period to increase statistical

power. Also, it would be helpful to include a no-treatment control group to determine if either treatment condition is better than no treatment at all.

3. It would be also of interest to replicate this study using a different death anxiety instrument such as the Collett-Lester Fear of Death Scale as well as the inclusion of an instrument to measure unconscious death anxiety.

4. A longitudinal study measuring the effects of having a formally trained empathic physician on patient outcomes such as quality of life and length of survival would be valuable.

5. Future studies using a large sample size might divide subjects into highly death anxious subjects and low death anxious subjects and examine the effects of the instructional seminar on both death anxiety levels and empathic ability of medical students.

6. A replication of the present quantitative study to include qualitative data obtained from unstructured interviews with students and patients as they interact over the 10-week period would offer a richer understanding of what transpires between two human beings who share a common journey into the phenomenal world of the patient who is confronting one of life's most difficult challenges.

Conclusion

The present study tested four null hypotheses of which three were retained and one was rejected. Findings of the study indicated that the students' self-reported empathy ratings did not significantly differ between the experimental group that received the death education/empathy

skills instructional seminar along with weekly relationship-building sessions with a terminally ill cancer patient and the comparison group that received the weekly relationship-building sessions without any educational intervention or feedback. Likewise, the self-reports of patients who rated their students' empathy did not differ significantly between the two treatment condition groups. However, objective trained observers who rated communicated empathy of the students on videotapes revealed that the trained students displayed significantly more empathic behaviors than the comparison group. In light of these findings, it was concluded that there is an indication that the formal death education/empathy skills instructional seminar does hold potential benefits for medical education. However, further research is necessary in order to substantially support the inclusion of such a program into the medical school curriculum.

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Appendix A
CLASS MATERIAL

**COMMUNICATION WITH THE TERMINALLY ILL
UNIVERSITY OF OSTEOPATHIC MEDICINE AND HEALTH SCIENCES**

**George S. Lair
Instructor**

PURPOSE OF THE SEMINAR

The purpose of the seminar is to help you become more empathic and to improve your ability to communicate that empathy to terminally ill persons.

TOPICS TO BE COVERED IN SEMINAR

1. Empathy and communication I
2. Empathy and communication II
3. The meaning of crisis
4. Appropriate and healthy death
5. Death anxiety
6. Pain management without drugs
7. Growth through the final stage
8. Empathy revisited

The didactic part of the seminar will be lecture/discussion, and will last between 45 and 75 minutes per week. The remainder of the seminar will be focused on the practice of empathic communication.

COUNSELOR _____
CLIENT _____

DATE _____
SESSION _____

Direct question

Comments regarding empathy

General lead

Exploring

Acceptance

Focusing on feelings

Clarification of feelings

Comments/content, 1st third

Restatement

Reflection of feelings

Confrontation

Interpretation

Self disclosure

Process comment

Comments/content, 2nd third

Silence

Information giving

Approval

Assurance

Advice/opinion

Structuring

Comments/content, last third

Conversation responses

Appendix B
INSTRUMENTS

TEMLER'S DEATH ANXIETY SCALE

Please mark T after statements you feel are true and F after statements that you feel are false.

1. I am very much afraid to die. _____
2. The thought of death seldom enters my mind. _____
3. It doesn't make me nervous when people talk about death. _____
4. I dread to think about having to have an operation. _____
5. I am not at all afraid to die. _____
6. I am not particularly afraid of getting cancer. _____
7. The thought of death never bothers me. _____
8. I am often distressed by the way time flies so very rapidly. _____
9. I fear dying a painful death. _____
10. The subject of life after death troubles me greatly. _____
11. I am really scared of having a heart attack. _____
12. I often think about how short life really is. _____
13. I shudder when I hear people talking about a World War III. _____
14. The sight of a dead body is horrifying to me. _____
15. I feel that the future holds nothing for me to fear. _____

TRUAX AND CARKHUFF ACCURATE EMPATHY SCALE

Stage 1

The counselor seems completely unaware of even the most conspicuous of the client's feelings. His/her responses are not appropriate to the mood and content of the client's statements, and there is no determinable quality of empathy, hence, no accuracy whatsoever. The counselor may be bored and disinterested or actively offering advice, but he/she is not communicating an awareness of the client's current feelings.

Stage 2

The counselor shows a degree of accuracy which is almost negligible in his/her responses, and then only toward the client's most obvious feelings. Any emotions which are not so clearly defined, he/she tends to ignore altogether. He/she may be correctly sensitive to obvious feelings and yet misunderstand much of what the client is really trying to say. By his/her response he/she may block off or may misdirect the client. Stage 2 is distinguishable from Stage 3 in that the counselor ignores feelings rather than displaying an inability to understand feelings.

Stage 3

The counselor often responds accurately to the client's more exposed feelings. He/she also displays concern for the deeper, more hidden feelings, which he/she seems to sense must be present, though he/she does not understand their nature. The counselor seems to assume the presence of deep feelings, although he/she does not sense their meaning to this particular client.

Stage 4

The counselor usually responds accurately to the client's more obvious feelings and occasionally recognizes some that are less apparent. In the process of this tentative probing, however, he/she may anticipate feelings which are not current to the client, as well as misinterpret some present feelings. Sensitivity and awareness of the counselor are present, but he/she is not entirely "with" the client in the *current* situation or experience. The desire and effort to understand are both present but accuracy is low. It is distinguishable from Stage 3 in that the counselor does occasionally recognize feelings that are less apparent. Also, the counselor may seem to have a theory about the client and may even know how or why the patient feels a particular way, but the counselor is definitely not "with" the client--they are not together. In short, the counselor may be diagnostically accurate, but not empathically accurate in his/her sensitivity to the current feeling state of the client.

Stage 5

The counselor accurately responds to all of the client's more readily discernible feelings. He/she shows awareness of many feelings and experiences which are not so evident, too, but in these he/she tends to be somewhat inaccurate in his/her understanding. The therapist may recognize more feelings that are not so evident. When he/she does not understand completely, this lack of complete understanding is communicated without an anticipatory or jarring note. His/her misunderstandings are not disruptive by their tentative nature. Sometimes in Stage 5 the counselor simply communicates his/her awareness of the problem of understanding another person's inner world. Stage 5 is the midpoint on the continuum of accurate empathy.

Stage 6

The counselor recognizes most of the client's present feelings, including those which are not readily apparent. Sometimes, however, he/she tends to misjudge the intensity of these veiled feelings, with the result that his/her responses are not always accurately suited to the exact mood of the client. In content, however, his/her understanding or recognition includes those not readily apparent. The counselor deals with feelings that are current with the client. He/she may misjudge the intensity of less apparent feelings. Often the counselor, while sensing the feelings, is unable to communicate meaning to these feelings. The therapist statements contain an almost static quality in contrast to Stage 7 in the sense that the counselor handles those feelings that the client offers but does not bring new elements to life. He/she is with the client but does not encourage exploration. His/her manner of communicating his/her understanding is such that he/she makes of it a finished thing.

Stage 7

The counselor responds accurately to most of the client's present feelings. He/she shows awareness of the precise intensity of most underlying emotions. However, his/her responses move only slightly beyond the area of the client's own awareness, so that feelings may be present which are not recognized by the client or counselor. The counselor moves on his/her own to more emotionally laden material. The counselor may communicate simply that the client and he/she are moving toward more emotionally significant material. Stage 7 is distinguishable from Stage 6 in that often the counselor response is a kind of pointing of the finger toward emotionally significant material with great precision in the direction of pointing.

Stage 8

The counselor accurately interprets all the client's present, acknowledged feelings. He/she also uncovers the most deeply-shrouded of the client's feeling areas, voicing meanings in the client's experience of which the client is scarcely aware. Since he/she must necessarily utilize a method of trial and error in the new uncharted areas, there are

resulting minor flaws in the accuracy of his/her understanding, but inaccuracies are held tentatively. He/she moves into feelings and experiences that are only hinted at by the client and does so with sensitivity and accuracy. The counselor offers specific explanations or additions to the client's understanding so that not only are underlying emotions pointed to, but they are specifically talked about. The content that comes to life may be new, but it is not alien. While the counselor in Stage 8 makes mistakes, mistakes do not have a jarring note, but are covered by the tentative character of the response. Also, the counselor is sensitive to his/her mistakes and quickly alters or changes his/her response in midstream, indicating that he/she more clearly knows what is being talked about and what is being sought after in the client's own explorations. The counselor reflects a togetherness with the client in tentative trial and error exploration. His/her voice tone reflects the seriousness and depth of his/her empathic grasp.

Stage 9

The counselor unerringly responds to the client's full range of feelings in their exact intensity. Without hesitation, he/she recognizes each emotional nuance and communicates an understanding of every deepest feeling. He/she is completely attuned to the client's shifting emotional content; he/she senses each of the client's feelings and reflects them in his/her words and *voice*. He/she expands the client's hint into a full-blown but tentative elaboration of feeling or experience with unerring sensitive accuracy. Both a precision in understanding and a precision in the communication of this understanding are present. Both are expressed and experienced by the counselor without hesitancy.

BARRETT- LENNARD EMPATHIC UNDERSTANDING SCALE OS--M-16

Below are listed a variety of ways that one person may feel or behave in relation to another person.

Please consider each statement with reference to your present relationship with your _____.

Mark each statement in the left margin, according to how strongly you feel that it is true, or not true, in this relationship. Please mark every one. Write in +1, +2, +3, or -1, -2, -3, to stand for the following answers:

- | | |
|---|--|
| +3: Yes, I strongly feel that it is true. | -1: No, I feel that it is probably untrue, or more untrue than true. |
| +2: Yes, I feel that it is true. | -2: No, I feel it is not true. |
| +1: Yes, I feel that it is probably true, or more true than untrue. | -3: No, I strongly feel that it is not true. |

-
- _____ 1. He wants to understand how I see things.
 - _____ 2. He may understand my words but he does not see the way I feel.
 - _____ 3. He nearly always knows exactly what I mean.
 - _____ 4. He looks at what I do from his own point of view.
 - _____ 5. He usually senses or realizes what I am feeling.
 - _____ 6. His own attitudes toward some of the things I do or say prevent him from understanding me.
 - _____ 7. Sometimes he thinks that I feel a certain way, because that's the way he feels.
 - _____ 8. He realizes what I mean even when I have difficulty in saying it.
 - _____ 9. He usually understands the whole of what I mean.
 - _____ 10. He just takes no notice of some things that I think or feel.
 - _____ 11. He appreciates exactly how the things I experience feel to me.

- ___ 12. At times he thinks that I feel a lot more strongly about a particular thing than I really do.
- ___ 13. He does not realize how sensitive I am about some of the things we discuss.
- ___ 14. He understands me.
- ___ 15. His response to me is usually so fixed and automatic that I don't really get through to him.
- ___ 16. When I am hurt or upset he can recognize my feelings exactly, without becoming upset himself.

BARRETT-LENNARD EMPATHIC UNDERSTANDING SCALE OS--F-16

Below are listed a variety of ways that one person may feel or behave in relation to another person.

Please consider each statement with reference to your present relationship with your _____.

Mark each statement in the left margin, according to how strongly you feel that it is true, or not true, in this relationship. Please mark every one. Write +1, +2, +3, or -1, -2, -3, to stand for the following answers:

- | | |
|---|--|
| +3: Yes, I strongly feel that it is true | -1: No, I feel that it is probably untrue, or more untrue than true. |
| +2: Yes, I feel that it is true | -2: No, I feel it is not true. |
| +1: Yes, I feel that it is probably true, or more true than untrue. | -3: No, I strongly feel that it is not true. |

-
- _____ 1. She wants to understand how I see things.
 - _____ 2. She may understand my words but she does not see the way I feel.
 - _____ 3. She nearly always knows exactly what I mean.
 - _____ 4. She looks at what I do from her own point of view.
 - _____ 5. She usually senses or realizes what I am feeling.
 - _____ 6. Her own attitudes toward some of the things I do or say prevent her from understanding me.
 - _____ 7. Sometimes she thinks that I feel a certain way, because that's the way she feels.
 - _____ 8. She realizes what I mean even when I have difficulty in saying it.
 - _____ 9. She usually understands the whole of what I mean.
 - _____ 10. She just takes no notice of some things that I think or feel.
 - _____ 11. She appreciates exactly how the things I experience feel to me.

- _____ 12. At times she thinks that I feel a lot more strongly about a particular thing than I really do.
- _____ 13. She does not realize how sensitive I am about some of the things we discuss.
- _____ 14. She understands me.
- _____ 15. Her response to me is usually so fixed and automatic that I don't really get through to her.
- _____ 16. When I am hurt or upset she can recognize my feelings exactly, without becoming upset herself.

BARRETT-LENNARD EMPATHIC UNDERSTANDING SCALE M0--F-16

Below are listed a variety of ways that one person may feel or behave in relation to another person.

Please consider each statement with reference to your present relationship with your _____.

Mark each statement in the left margin, according to how strongly you feel that it is true, or not true, in this relationship. Please mark every one. Write in +1, +2, +3, or -1, -2, -3, to stand for the following answers:

- | | |
|---|--|
| +3: Yes, I strongly feel that it is true. | -1: No, I feel that it is probably untrue, or more untrue than true. |
| +2: Yes, I feel that it is true. | -2: No, I feel it is not true. |
| +1: Yes, I feel that it is probably true, or more true than untrue. | -3: No, I strongly feel that it is not true. |

-
- _____ 1. I want to understand how she sees things.
 - _____ 2. I understand her words but do not know how she actually feels.
 - _____ 3. I nearly always know exactly what she means.
 - _____ 4. I look at what she does from my own point of view.
 - _____ 5. I usually sense or realize how she is feeling.
 - _____ 6. What she says or does sometimes arouses feelings in me that prevent me from understanding her.
 - _____ 7. Sometimes I think that she feels a certain way, because that's the way way I feel myself.
 - _____ 8. I can tell what she means, even when she has difficulty in saying it.
 - _____ 9. I usually understand the whole of what she is meaning.
 - _____ 10. I ignore some of her feelings.
 - _____ 11. I appreciate just how her experiences feel to her.

- ___ 12. At times I think that she feels strongly about something and then it turns out that she doesn't.
- ___ 13. At the time I don't realize how touchy or sensitive she is about some of the things we discuss.
- ___ 14. I understand her.
- ___ 15. I often respond to her rather automatically, without taking in what she is experiencing.
- ___ 16. When she is hurt or upset I can recognize just how she feels, without getting upset myself.

Appendix C
CONSENT FORMS

Drake University Department of Counselor Education and the
University of Osteopathic Medicine and Health Sciences

INFORMED CONSENT FORM

Title of Project: Effects of a combined didactic and experiential death education/
empathy training program on death anxiety and empathic ability
of medical students

Principal Investigator: Deborah L. Reed, Ed.S., Ed.D. candidate in the Department
of Counselor Education (Phone 224-6710)

Academic Advisor: George S. Lair, Ph.D., Professor in Counselor Education,
Drake University (271-2856)

This is to certify that I, _____ (PRINT FULL NAME), agree to
participate as a volunteer in a scientific investigation as part of an authorized research
project of Drake University and the University of Osteopathic Medicine and Health
Sciences under the supervision of Deborah Lynn Reed.

I understand that this research project is designed to measure the effectiveness of a new
medical education course in physician-patient communication skills for students at the
University of Osteopathic Medicine and Health Sciences. If I agree to participate in this
study, I understand that I will have a second-year medical student randomly (by chance)
chosen to work with me over a period of 10 weeks. This student may or may not be
assigned to the experimental educational intervention. The student will meet with me once
each week for a 40-minute session. The sessions will be unstructured in nature and I will
be encouraged to share with the student any concerns and issues regarding my illness
experience that feels comfortable for me to talk about. The role of the student is to listen
and help facilitate the exploration of my feelings. The student will not be doing any
physical diagnoses, offering medical advice, or be involved in future treatment plans. I
give my consent to videotape each student-patient session for educational purposes. I
understand that the investigator will call me during the next two weeks to schedule my
first session with the medical student. Following the first session, the medical student will
call and arrange future sessions at times and on days that are mutually convenient for both
of us. All sessions will take place in a designated room in the medical library at the Azneer
Academic Center. I further understand that, as part of this study, I will be asked to
complete a pencil and paper questionnaire following my first session with the medical
student, then again in 10 weeks following our final session together. The questionnaire
will require approximately 15 minutes to complete.

I understand that no risks or discomforts are anticipated as a result of my participating in the study. If I should experience anxiety, depression, or other forms of psychological distress which cannot be adequately addressed within the context of the study, an appropriate referral for additional help will be made by the investigator or course instructor. If for any reason I feel too ill to attend one of the weekly sessions with the medical student, I understand that I am free to cancel the session and still remain in the study. Likewise, if during a session I begin to feel ill and desire to end the session early, I am free to do so and still remain an active study participant. I understand that a potential benefit of this study is that I may find the sessions with the medical student to be helpful in reducing emotional distress related to my illness and its treatment. I understand, however, that I may receive no benefit from participation. The possible benefit of this study to humanity includes new knowledge about empathy training for medical students related to the care of the cancer patient. Such knowledge may lead to improved communication between physicians and cancer patients in the future.

I understand that the information obtained from me will be kept confidential to the following extent: the questionnaires will not have participants' names, only coded numbers which the investigator will assign. Once the questionnaires are collected by the investigator, the information provided will be identifiable only by coded numbers. The videotapes of student-patient sessions will also be labeled by coded numbers assigned by the investigator. These tapes will be viewed for educational purposes only by the student assigned to me, the course instructor, and other medical students in the process seminar group. In addition, I understand that two master's level counselors assigned to the project will also view the videotapes following the first and final student-patient sessions for the purpose of rating student performance.

I understand that my decision whether or not to participate in this study will not prejudice me or my medical care with any of my current health care providers. If I decide to participate, I understand that I am free to withdraw my consent and discontinue participation at any time without prejudice to me or my medical care.

I understand that the research investigator named above and the academic advisor will answer any of my questions about the research procedures and my rights as a participant at any time. I will be offered a copy of this form to keep. In addition, as a participant in this study, I understand that I may receive a copy of the results once the study has been completed. A check box has been provided on this form to indicate my desire to receive a copy of the findings. If I am uncertain whether or not I would like a copy at this time but later choose to obtain one, I may call the investigator and a copy will be mailed to me.

I understand that I am making a decision whether or not to participate. My signature indicates that I have read the information provided above and have decided to participate. I may withdraw at any time without prejudice after signing this form should I chose to discontinue participation in this study.

(Date)

(Signature)

☐

Please check the box if
you desire a copy of the
study's results.

(Witness)

Drake University Department of Counselor Education and the
University of Osteopathic Medicine and Health Sciences

INFORMED CONSENT FORM

Title of Project: Effects of a combined didactic and experiential death education/
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Principal Investigator: Deborah L. Reed, Ed.S., Ed.D. candidate in the Department
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Academic Advisor: George S. Lair, Ph.D., Professor in Counselor Education,
Drake University (271-2856)

This is to certify that I, _____ (PRINT FULL NAME), agree to
participate as a volunteer in a scientific investigation as part of an authorized research
project of Drake University and the University of Osteopathic Medicine and Health
Sciences under the supervision of Deborah Lynn Reed.

I understand that this research project is designed to investigate if a death
education/empathy training seminar comprised of both didactic and experiential teaching
components is helpful to medical students in terms of lowering their death-related fears
and in enhancing their ability to communicate empathically with terminally ill cancer
patients. I understand that the didactic component of the educational intervention is
primarily instructional, information giving. I further understand that the experiential
component of the educational intervention consists primarily of process seminars in which
students will explore the nature of the relationship that they are developing with a
terminally ill cancer patient as revealed on videotape. Instructor feedback and guidance
will be offered during the process seminars to help students increase awareness of personal
attitudes and feelings toward death which might interfere with empathic understanding of
their patients' experiences of their illness. In addition, students will learn and rehearse
empathic communication skills which serve to facilitate the development of trust within
the student-patient dyad.

If I agree to participate in this study, I understand that I will be assigned a cancer patient
whose disease is life-threatening with whom I will establish a facilitative relationship over
a period of 10 weeks. Each weekly student-patient session will last 40 minutes and I give
my consent to videotape these sessions for review by the course instructor. The initial
student-patient session will take place today. I understand that I am to explore the nature
of the patient's concerns, recognizing the limitations of my training to date. In addition, I

understand that, as part of this study, I will be assigned randomly (by chance) to either: 1) the experimental group which receives the didactic and experiential instructional seminars or, 2) a control group which receives no formal instruction or feedback from the course instructor. The 10 instructional seminars will meet once a week for 3 hours and will include a one-hour didactic component and a two-hour experiential component. The first instructional seminar will meet on February 5, 1996, in Room 303 at the medical library in the Azneer Academic Center. I further understand that I will be asked to complete two pencil and paper questionnaires today following the session with my assigned patient then again in 10 weeks following our final session together. Each of these assessments will require approximately 20 minutes. I understand that it is my responsibility to both schedule the weekly sessions with my patient and also to sign up for one of the designated rooms in the medical library at the Azneer Academic Center in which to conduct the sessions. A videocamera will be provided.

I understand that no risks or discomforts are anticipated as a result of my participating in the study. If I should experience anxiety, depression, or other forms of psychological distress which cannot be adequately addressed within the context of the study, an appropriate referral for additional help will be made by the investigator or course instructor. I also understand that such a referral will in no way adversely affect my academic status at the University of Osteopathic Medicine and Health Sciences. I understand that the potential benefits of this study are that those students who participate in the instructional seminars (experimental group) may find this intervention to be helpful in the following ways: a) increasing knowledge concerning death, dying, and bereavement, b) improving empathic communication skills with dying patients and their families, c) the resolution of personal feelings concerning loss and anxiety about death and the process of dying, and d) greater emotional accessibility to dying patients and their families. I further understand that those students who do not receive the instructional seminars (control group) but have the opportunity to establish an ongoing relationship with a terminally ill cancer patient may be helped to gain an understanding of the personal impact of living with such a condition on the patient as well as coping mechanisms employed. In addition, these students will have the opportunity to practice and hone their communication skills while participating in the student-patient sessions.

I understand that the information obtained from or about me will be kept confidential to the following extent: the questionnaires will not have participants' names, only coded numbers which the investigator will assign. Once questionnaires are collected by the investigator, the information provided will be identifiable only by coded numbers. I understand that the scores on the questionnaires will be seen only by the investigator and will not be available to the course instructor. The videotapes of student-patient sessions will also be labeled by coded numbers assigned by the investigator. These tapes will be viewed only by the course instructor except in the following instances: a) those videotapes which are shared with fellow students for training purposes during process seminars and, b) those videotapes which are viewed for rating purposes by two master's level counselors following the first and final student-patient sessions. I understand that the ratings given these sessions will not be shared with the course instructor.

I understand that my decision whether or not to participate in this study will not prejudice my student status at the University of Osteopathic Medicine and Health Sciences. If I decide to participate, I understand that I am free to withdraw my consent and discontinue participation at any time without prejudice to my student status at the University of Osteopathic Medicine and Health Sciences.

I understand that the research investigator named above and the academic advisor will answer any of my questions about the research procedures and my rights as a subject at any time. I will be offered a copy of this form to keep. In addition, as a participant in this study, I understand that I may receive a copy of the results once the study has been completed. A check box has been provided on this form to indicate my desire to receive a copy of the findings. If I am uncertain whether or not I would like a copy at this time but later choose to obtain one, I may call the investigator and a copy will be mailed to me.

I understand that I am making a decision whether or not to participate. My signature indicates that I have read the information provided above and have decided to participate. I may withdraw at any time without prejudice after signing this form should I choose to discontinue participation in this study.

(Date)

(Signature)

☐

Please check the box if you
desire a copy of the study's
results.

(Witness)